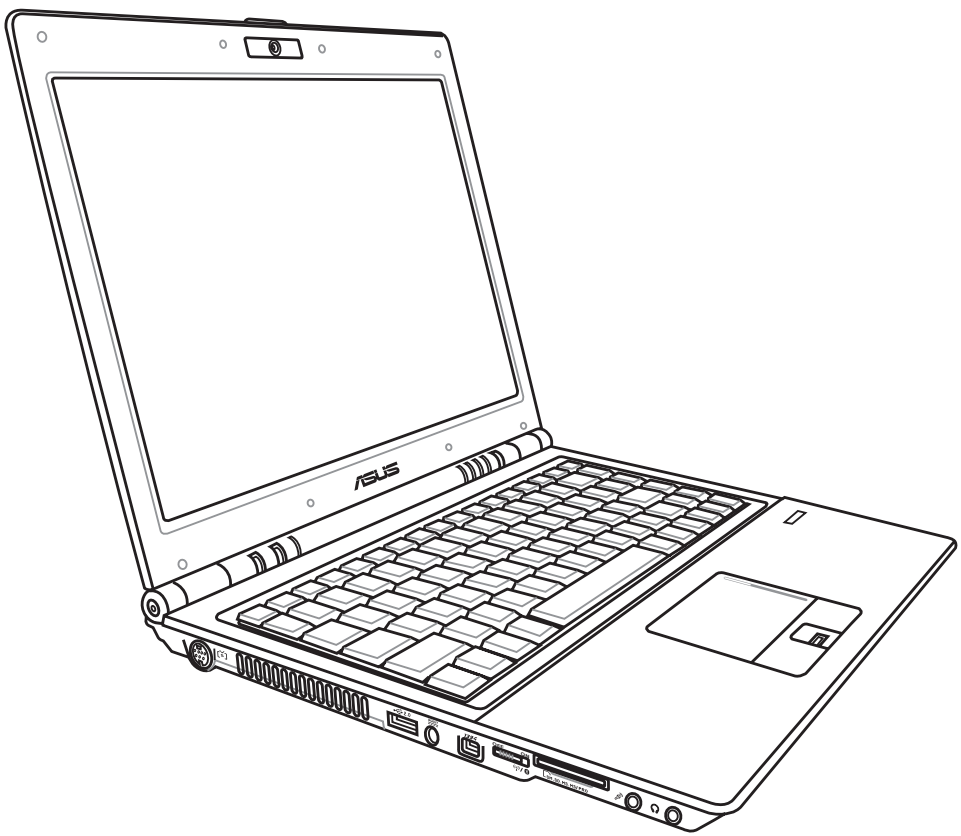
Notebook PC

Hardware User's Manual



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1. Introducing the Notebook PC

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NOTE: Photos and icons in this manual are used for artistic purposes only and do not show what is actually used in the product itself.

About This User's Manual

You are reading the Notebook PC User's Manual. This User's Manual provides information on the various components in the Notebook PC and how to use them. The following are major sections of this User's Manuals:

1. **Introducing the Notebook PC**
   Introduces you to the Notebook PC and this User's Manual.
2. **Knowing the Parts**
   Gives you information on the Notebook PC's components.
3. **Getting Started**
   Gives you information on getting started with the Notebook PC.
4. **Using the Notebook PC**
   Gives you information on using the Notebook PC's components.
5. **Appendix**
   Introduces you to optional accessories and gives additional information.

Notes For This Manual

A few notes and warnings in bold are used throughout this guide that you should be aware of in order to complete certain tasks safely and completely. These notes have different degrees of importance as described below:

NOTE: Tips and information for special situations.

TIP: Tips and useful information for completing tasks.

IMPORTANT! Vital information that must be followed to prevent damage to data, components, or persons.

WARNING! Important information that must be followed for safe operation.

< > [ ] **Text enclosed in < > or [ ] represents a key on the keyboard; do not actually type the < > or [ ] and the enclosed letters.**

Safety Precautions

The following safety precautions will increase the life of the Notebook PC. Follow all precautions and instructions. Except as described in this manual, refer all servicing to qualified personnel. Do not use damaged power cords, accessories, or other peripherals. Do not use strong solvents such as thinners, benzene, or other chemicals on or near the surface.

IMPORTANT! Disconnect the AC power and remove the battery pack(s) before cleaning. Wipe the Notebook PC using a clean cellulose sponge or chamois cloth dampened with a solution of nonabrasive detergent and a few drops of warm water and remove any extra moisture with a dry cloth.

DO NOT place on uneven or unstable work surfaces. Seek servicing if the casing has been damaged.

DO NOT place or drop objects on top and do not shove any foreign objects into the Notebook PC.

DO NOT press or touch the display panel. Do not place together with small items that may scratch or enter the Notebook PC.

DO NOT expose to strong magnetic or electrical fields.

DO NOT expose to dirty or dusty environments. **DO NOT** operate during a gas leak.

DO NOT expose to or use near liquids, rain, or moisture. **DO NOT** use the modem during an electrical storm.

DO NOT leave the Notebook PC on your lap or any part of the body in order to prevent discomfort or injury from heat exposure.

Battery safety warning:
DO NOT throw the battery in fire.
DO NOT short circuit the contacts.
DO NOT disassemble the battery.

SAFE TEMP: This Notebook PC should only be used in environments with ambient temperatures between 5°C (41°F) and 35°C (95°F)

INPUT RATING: Refer to the rating label on the bottom of the Notebook PC and be sure that your power adapter complies with the rating.

DO NOT throw the Notebook PC in municipal waste. Check local regulations for disposal of electronic products.

DO NOT carry or cover a Notebook PC that is powered ON with any materials that will reduce air circulation such as a carrying bag.

Models with 3G[1]: Produces radio wave emissions that may cause electrical interferences and must be used in places that do not prohibit such devices. Take precautions while using.

WARNING! The 3G function needs to be switched OFF in areas with potentially explosive atmospheres such as petrol (gas) stations, chemical storage depots, and blasting operations.

[1] (See end of Section 4 for definition)

Transportation Precautions

To prepare the Notebook PC for transport, you should turn it OFF and **disconnect all external peripherals to prevent damage to the connectors**. The hard disk drive's head retracts when the power is turned OFF to prevent scratching of the hard disk surface during transport. Therefore, you should not transport the Notebook PC while the power is still ON. Close the display panel and check that it is latched securely in the closed position to protect the keyboard and display panel.

CAUTION: The Notebook PC's surface is easily dulled if not properly cared for. Be careful not to rub or scrape the Notebook PC surfaces.

Cover Your Notebook PC

Purchase a carrying bag to protect the Notebook PC from dirt, water, shock, and scratches.

Charge Your Batteries

If you intend to use battery power, be sure to fully charge your battery pack and any optional battery packs before going on long trips. Remember that the power adapter charges the battery pack as long as it is plugged into the computer and an AC power source. Be aware that it takes much longer to charge the battery pack when the Notebook PC is in use.

Airplane Precautions

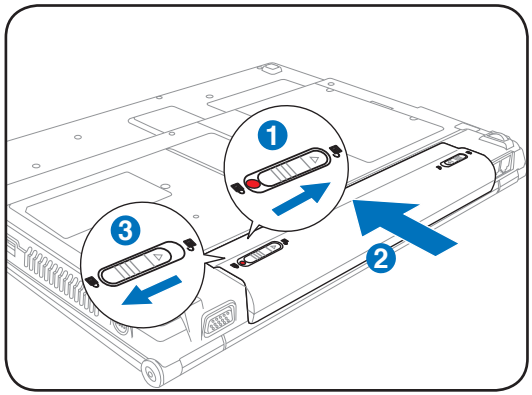
Contact your airline if you want to use the Notebook PC on the airplane. Most airlines will have restrictions for using electronic devices. Most airlines will allow electronic use only between and not during takeoffs and landings.

CAUTION! There are three main types of airport security devices: X-ray machines (used on items placed on conveyor belts), magnetic detectors (used on people walking through security checks), and magnetic wands (hand-held devices used on people or individual items). You can send your Notebook PC and diskettes through airport X-ray machines. However, it is recommended that you do not send your Notebook PC or diskettes through airport magnetic detectors or expose them to magnetic wands.

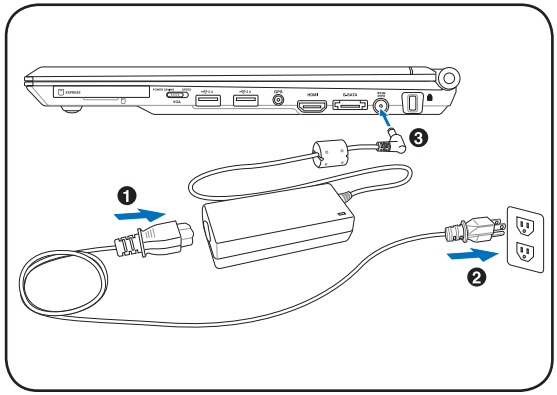
Preparing your Notebook PC

These are only quick instructions for using your Notebook PC. Read the later pages for detailed information on using your Notebook PC.

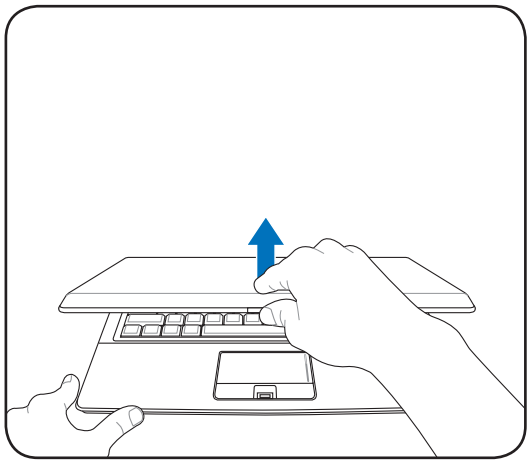
1. Install the battery pack



2. Connect the AC Power Adapter

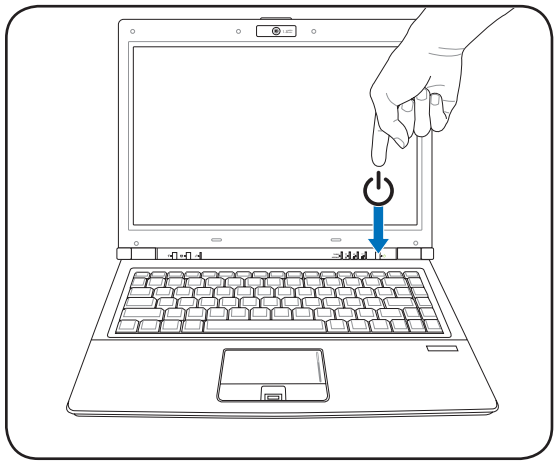


3. Open the Display Panel



IMPORTANT! When opening, do not force the display panel down to the table or else the hinges may break! Never lift the Notebook PC by the display panel!

4. Turn ON the Notebook PC



The power switch turns ON and OFF the Notebook PC or putting the Notebook PC into sleep or hibernation modes. Actual behavior of the power switch can be customized in Windows Control Panel > Power Options > **System Settings**.

2. Knowing the Parts

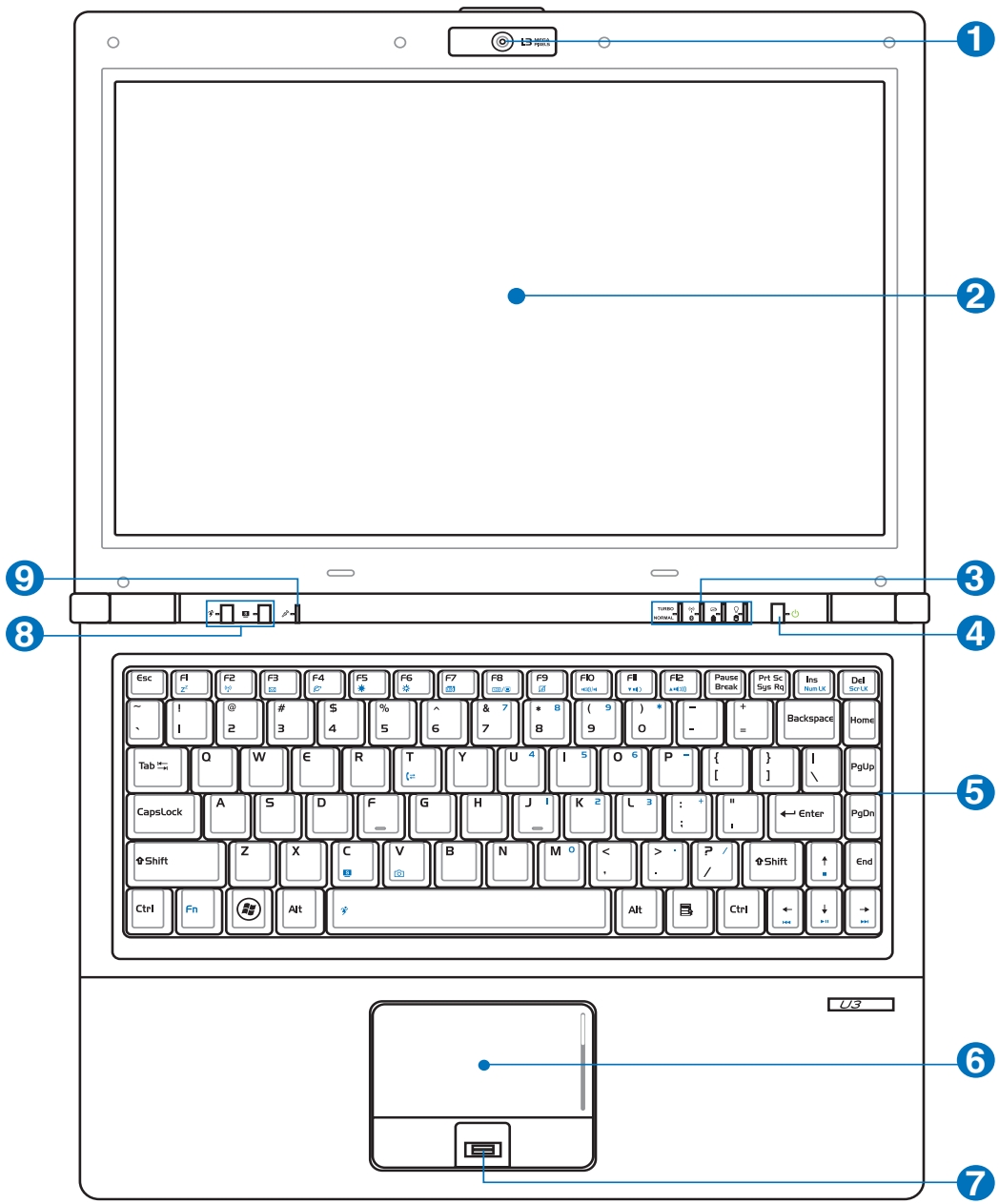
Basic sides of the Notebook PC

NOTE: Photos and icons in this manual are used for artistic purposes only and do not show what is actually used in the product itself.

Top Side

Refer to the diagram below to identify the components on this side of the Notebook PC.

NOTE: The keyboard will be different for each territory.

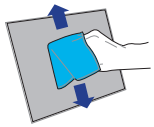


1 Camera (on selected models)

The built-in camera allows picture taking or video recording. Can be used with video conferencing and other interactive applications.

2 Display Panel

The Notebook PC uses an active matrix TFT LCD, which provides excellent viewing like that of desktop monitors. Unlike traditional desktop monitors, the LCD panel does not produce any radiation or flickering, so it is easier on the eyes. Use a soft cloth without chemical liquids (use plain water if necessary) to clean the display panel.



3 Status Indicators (top)

Status indicators represent various hardware/software conditions. See indicator details in section 3.

4 Power Switch

The power switch turns ON and OFF the Notebook PC or putting the Notebook PC into sleep or hibernation modes. Actual behavior of the power switch can be customized in Windows Control Panel "Power Options."

5 Keyboard

The keyboard provides full-sized keys with comfortable travel (depth at which the keys can be depressed) and palm rest for both hands. Two Windows function keys are provided to help ease navigation in the Windows operating system.

6 Touchpad and Buttons

The touchpad with its buttons is a pointing device that provides the same functions as a desktop mouse. A software-controlled scrolling function is available after setting up the included touchpad utility to allow easy Windows or web navigation.

7 Fingerprint Scanner (on selected models)

The built-in fingerprint scanner allows use of security software using your fingerprint as your identification key.

8 Instant Keys

Instant keys allow you to launch frequently used applications with one push of a button. Details are described in section 3.

9 Microphone (Built-in)

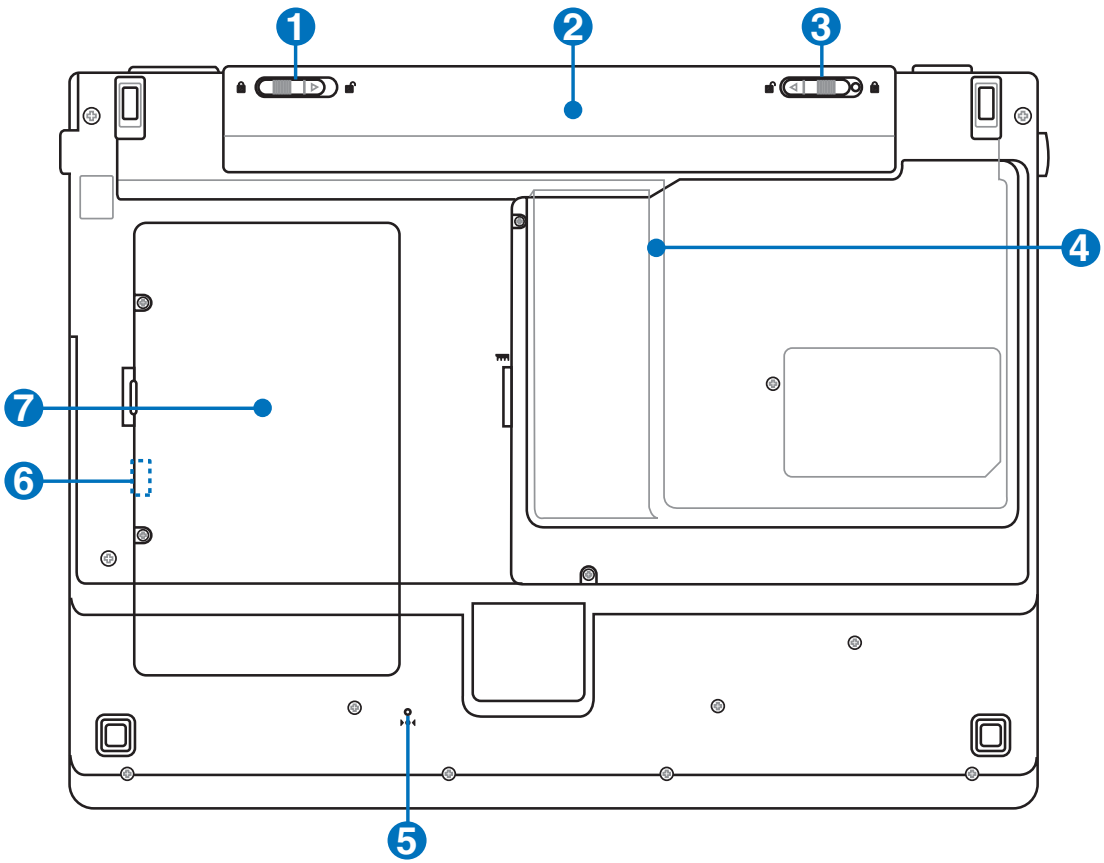
The built-in mono microphone can be used for video conferencing, voice narrations, or simple audio recordings.

Bottom Side

Refer to the diagram below to identify the components on this side of the Notebook PC.

NOTE: The bottom side may vary in appearance depending on model.

NOTE: The battery pack size will vary depending on model.



WARNING! The bottom of the Notebook PC can get very hot. Be careful when handling the Notebook PC while it is in operation or recently been in operation. High temperatures are normal during charging or operation. Do not use on soft surfaces such as beds or sofas which may block the vents. DO NOT PUT THE NOTEBOOK PC ON YOUR LAP OR OTHER PARTS OF THE BODY TO AVOID INJURY FROM THE HEAT.

1 Battery Lock - Spring

The spring battery lock is used to keep the battery pack secured. When the battery pack is inserted, it will automatically lock. To remove the battery pack, this spring lock must be held in the unlocked position.

2 Battery Pack (see Rear Side for description)

3 Battery Lock - Manual

The manual battery lock is used to keep the battery pack secured. Move the manual lock to the unlocked position to insert or remove the battery pack. Move the manual lock to the locked position after inserting the battery pack.

4 Memory (RAM) Compartment

The memory compartment provides expansion capabilities for additional memory. Additional memory will increase application performance by decreasing hard disk access. The BIOS automatically detects the amount of memory in the system and configures accordingly. There is no hardware or software (including BIOS) setup required after the memory is installed. Visit an authorized service center or retailer for information on memory upgrades for your Notebook PC. Only purchase expansion modules from authorized retailers of this Notebook PC to ensure maximum compatibility and reliability.

5 Shutdown Button (Emergency)

In case your operating system cannot properly turn OFF or restart, the shutdown button can be pressed with a straightened paper clip to shutdown the Notebook PC.

6 SIM Card Compartment (on selected models)

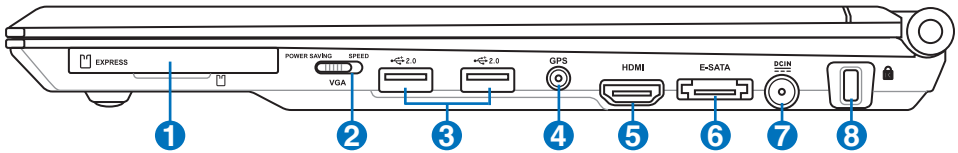
The SIM card compartment allows insertion of a mobile SIM card for 3G functions.

7 Hard Disk Drive Compartment

The hard disk drive is secured in a compartment. Visit an authorized service center or retailer for information on hard disk drive upgrades for your Notebook PC. Only purchase hard disk drives from authorized retailers of this Notebook PC to ensure maximum compatibility and reliability.

Right Side

Refer to the diagram below to identify the components on this side of the Notebook PC.



1 ExpressCard Slot

One 26pin Express card slot is available to support one ExpressCard/34mm or one ExpressCard/54mm expansion card. This new interface is faster by using a serial bus supporting USB 2.0 and PCI Express instead of the slower parallel bus used in the PC card slot. (Not compatible with previous PCMCIA cards.)

2 VGA Performance Switch (on selected models)

The VGA performance switch can be used to save battery power when not using an AC power adapter. Note: You must reboot the Notebook PC after changing this setting.

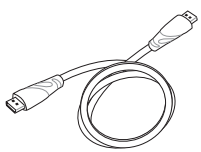
3 USB Port (2.0/1.1) (on selected models)

The USB (Universal Serial Bus) port is compatible with USB 2.0 or USB 1.1 devices such as keyboards, pointing devices, cameras, hard disk drives, printers, and scanners connected in a series up to 12Mbits/sec (USB 1.1) and 480Mbits/sec (USB 2.0). USB allows many devices to run simultaneously on a single computer, with some peripherals acting as additional plug-in sites or hubs. USB supports hot-swapping of devices so that most peripherals can be connected or disconnected without restarting the computer.

4 GPS Antenna Port (on selected models)

The GPS antenna port can accept an external GPS antenna for the built-in GPS receiver. Together, the built-in GPS can be used with various navigation software applications. (Note: Satellite reception can only be used outdoors. Turn OFF when indoors to decrease use of Notebook PC resources.) **WARNING: DO NOT USE THE NOTEBOOK PC WHILE OPERATING MOTOR VEHICLES.**

5 HDMI Port (on selected models)



HDMI (High-Definition Multimedia Interface) is an uncompressed all-digital audio/video interface between any audio/video source, such as a set-top box, DVD player, and A/V receiver and an audio and/or video monitor, such as a digital television (DTV). Supports standard, enhanced, or high-definition video, plus multi-channel digital audio on a single cable. It transmits all ATSC HDTV standards and supports 8-channel digital audio, with bandwidth to spare to accommodate future enhancements or requirements.

6 E-SATA E-SATA Port (on selected models)

External SATA or eSATA allows external connection of Serial-ATA devices originally designed for use inside the computer. It is up to six times faster than existing USB 2.0, & 1394 for external storage solutions and is also hot pluggable using shielded cables and connectors up to two meters.

7 DCIN Power (DC) Input

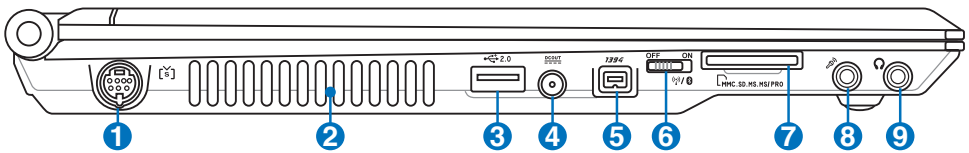
The supplied power adapter converts AC power to DC power for use with this jack. Power supplied through this jack supplies power to the Notebook PC and charges the internal battery pack. To prevent damage to the Notebook PC and battery pack, always use the supplied power adapter. **CAUTION: MAY BECOME WARM TO HOT WHEN IN USE. BE SURE NOT TO COVER THE ADAPTER AND KEEP IT AWAY FROM YOUR BODY.**

8 Kensington® Lock Port

The Kensington® lock port allows the Notebook PC to be secured using Kensington® compatible Notebook PC security products. These security products usually include a metal cable and lock that prevent the Notebook PC to be removed from a fixed object. Some may also include a motion detector to sound an alarm when moved.

Left Side

Refer to the diagram below to identify the components on this side of the Notebook PC.



1 TV-Out Port

The TV-Out port is an S-Video connector that allows routing the Notebook PC's display to a television or video projection device. You can choose between simultaneously or single display. Use an S-Video cable (not provided) for high quality displays or use the provided RCA to S-Video adapter for standard video devices. This port supports both NTSC and PAL formats.

2 Air Vents

The air vents allow cool air to enter and warm air to exit the Notebook PC.

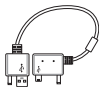
IMPORTANT! Make sure that paper, books, clothing, cables, or other objects do not block any of the air vents or else overheating may occur.

3 USB Port (2.0/1.1) (on selected models)

(See other side for description.)

4 Power (DC) Output (for external optical drive)

This port supplies power to an external optical disk drive using the provided cable.



5 IEEE1394 Port (on selected models)

IEEE1394 is a high speed serial bus like SCSI but has simple connections and hot-plugging capabilities like USB. The interface IEEE1394 has a bandwidth of 100-400 Mbits/sec and can handle up to 63 units on the same bus. IEEE1394 is also used in high-end digital equipment and should be marked "DV" for Digital Video port.

6 Wireless Switch

Enables or disables the built-in wireless LAN and Bluetooth (selected models). When enabled, the wireless status indicator will light. Windows software settings are necessary before use.

7 Flash Memory Slot

Normally an external memory card reader must be purchased separately in order to use memory cards from devices such as digital cameras, MP3 players, mobile phones, and PDAs. This Notebook PC has a built-in high-speed memory card reader that can conveniently read from and write to many flash memory cards as mentioned later in this manual.

8 Microphone Input Jack

The mono microphone jack (1/8 inch) can be used to connect an external microphone or output signals from audio devices. Using this jack automatically disables the built-in microphone. Use this feature for video conferencing, voice narrations, or simple audio recordings.

9 SPDIF Output Jack

Combo

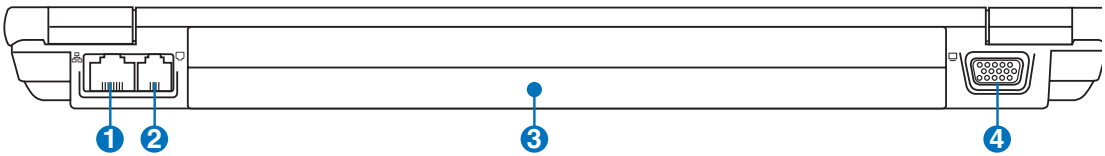
This jack provides connection to SPDIF (Sony/Philips Digital Interface) compliant devices for digital audio output. Use this feature to turn the Notebook PC into a hi-fi home entertainment system.

Headphone Output Jack

The stereo headphone jack (1/8 inch) is used to connect the Notebook PC's audio out signal to amplified speakers or headphones. Using this jack automatically disables the built-in speakers.

Rear Side

Refer to the diagram below to identify the components on this side of the Notebook PC.



1 LAN Port

The RJ-45 LAN port with eight pins is larger than the RJ-11 modem port and supports a standard Ethernet cable for connection to a local network. The built-in connector allows convenient use without additional adapters.

2 Modem Port

The RJ-11 modem port with two pins is smaller than the RJ-45 LAN port and supports a standard telephone cable. The internal modem supports up to 56K V.90 transfers. The built-in connector allows convenient use without additional adapters.

IMPORTANT! The built-in modem does not support the voltage used in digital phone systems. Do not connect the modem port to a digital phone system or else damage will occur to the Notebook PC.

3 Battery Pack

The battery pack is automatically charged when the Notebook PC is connected to an AC power source and maintains power to the Notebook PC when AC power is not connected. This allows use when moving temporarily between locations. Battery time varies by usage and by the specifications for this Notebook PC. The battery pack cannot be disassembled and must be purchased as a single unit.

4 Display (Monitor) Output

The 15-pin D-sub monitor port supports a standard VGA-compatible device such as a monitor or projector to allow viewing on a larger external display.

3. Getting Started

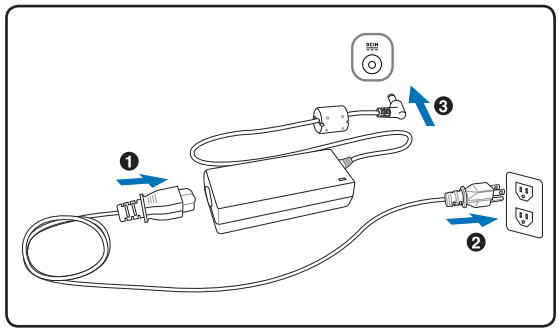
Using AC Power
Using Battery Power
Powering ON the Notebook PC
Checking Battery Power
Powering Options
Power Management Modes
Special Keyboard Functions
Switches and Status Indicators

NOTE: Photos and icons in this manual are used for artistic purposes only and do not show what is actually used in the product itself.

Power System

Using AC Power

The Notebook PC power is comprised of two parts, the power adapter and the battery power system. The power adapter converts AC power from a wall outlet to the DC power required by the Notebook PC. Your Notebook PC comes with a universal AC-DC adapter. That means that you may connect the power cord to any 100V-120V as well as 220V-240V outlets without setting switches or using power converters. Different countries may require that an adapter be used to connect the provided US-standard AC power cord to a different standard. Most hotels will provide universal outlets to support different power cords as well as voltages. It is always best to ask an experienced traveler about AC outlet voltages when bringing power adapters to another country.



TIP: You can buy travel kits for the Notebook PC that includes power and modem adapters for almost every country.

With the AC power cord connected to the AC-DC converter, connect the AC power cord to an AC outlet (preferably with surge-protection) and then connect the DC plug to the Notebook PC. Connecting the AC-DC adapter to the AC outlet first allows you to test the AC outlet's power and the AC-DC converter itself for compatibility problems before connecting the DC power to the Notebook PC. The power indicator on the adapter (if available) will light if the power is within accepted ranges.

IMPORTANT! Damage may occur if you use a different adapter to power the Notebook PC or use the Notebook PC's adapter to power other electrical devices. If there is smoke, burning scent, or extreme heat coming from the AC-DC adapter, seek servicing. Seek servicing if you suspect a faulty AC-DC adapter. You may damage both your battery pack(s) and the Notebook PC with a faulty AC-DC adapter.

NOTE: This Notebook PC may come with either a two or three-prong plug depending on territory. If a three-prong plug is provided, you must use a grounded AC outlet or use a properly grounded adapter to ensure safe operation of the Notebook PC.

WARNING! THE POWER ADAPTER MAY BECOME WARM TO HOT WHEN IN USE. BE SURE NOT TO COVER THE ADAPTER AND KEEP IT AWAY FROM YOUR BODY.

Using Battery Power

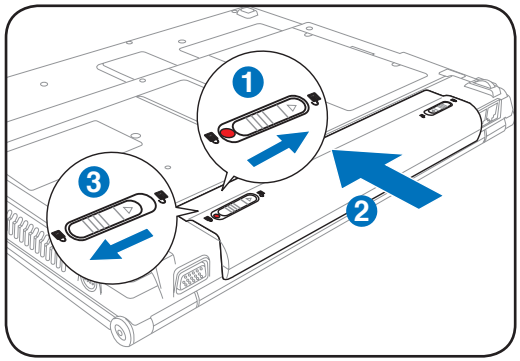
The Notebook PC is designed to work with a removable battery pack. The battery pack consists of a set of battery cells housed together. A fully charged pack will provide several hours of battery life, which can be further extended by using power management features through the BIOS setup. Additional battery packs are optional and can be purchased separately through a Notebook PC retailer.

Installing and Removing the Battery Pack

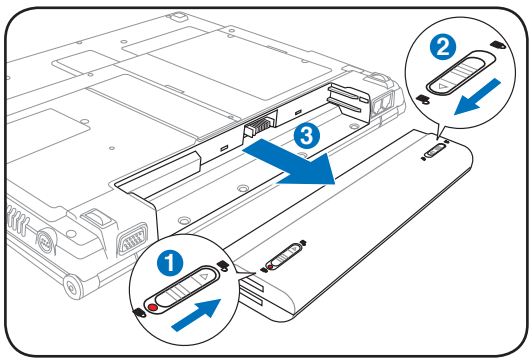
Your Notebook PC may or may not have its battery pack installed. If your Notebook PC does not have its battery pack installed, use the following procedures to install the battery pack.

IMPORTANT! Never attempt to remove the battery pack while the Notebook PC is turned ON, as this may result in the loss of working data.

To install the battery pack:



To remove the battery pack:



IMPORTANT! Only use battery packs and power adapters supplied with this Notebook PC or specifically approved by the manufacturer or retailer for use with this model or else damage may occur to the Notebook PC.

Battery Care

The Notebook PC's battery pack, like all rechargeable batteries, has a limit on the number times it can be recharged. The battery pack's useful life will depend on your environment temperature, humidity, and how your Notebook PC is used. It is ideal that the battery be used in a temperature range between 5°C and 35°C (41°F and 95°F). You must also take into account that the Notebook PC's internal temperature is higher than the outside temperature. Any temperatures above or below this range will shorten the life of the battery. But in any case, the battery pack's usage time will eventually decrease and a new battery pack must be purchased from an authorized dealer for this Notebook PC. Because batteries also have a shelf life, it is not recommended to buy extras for storing.

WARNING! For safety reasons, DO NOT throw the battery in fire, DO NOT short circuit the contacts, and DO NOT disassemble the battery. If there is any abnormal operation or damage to the battery pack caused by impact, turn OFF the Notebook PC and contact an authorized service center.

Powering ON the Notebook PC

The Notebook PC's power-ON message appears on the screen when you turn it ON. If necessary, you may adjust the brightness by using the hot keys. If you need to run the BIOS Setup to set or modify the system configuration, press [F2] upon bootup to enter the BIOS Setup. If you press [Tab] during the splash screen, standard boot information such as the BIOS version can be seen. Press [ESC] and you will be presented with a boot menu with selections to boot from your available drives.

NOTE: Before bootup, the display panel flashes when the power is turned ON. This is part of the Notebook PC's test routine and is not a problem with the display.

IMPORTANT! To protect the hard disk drive, always wait at least 5 seconds after turning OFF your Notebook PC before turning it back ON.

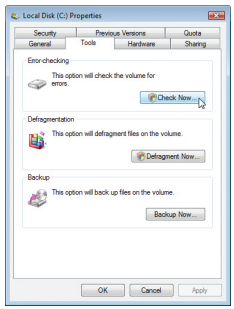
WARNING! DO NOT carry or cover a Notebook PC that is powered ON with any materials that will reduce air circulation such as a carrying bag.

The Power-On Self Test (POST)

When you turn ON the Notebook PC, it will first run through a series of software-controlled diagnostic tests called the Power-On Self Test (POST). The software that controls the POST is installed as a permanent part of the Notebook PC's architecture. The POST includes a record of the Notebook PC's hardware configuration, which is used to make a diagnostic check of the system. This record is created by using the BIOS Setup program. If the POST discovers a difference between the record and the existing hardware, it will display a message on the screen prompting you to correct the conflict by running BIOS Setup. In most cases the record should be correct when you receive the Notebook PC. When the test is finished, you may get a message reporting "No operating system found" if the hard disk was not preloaded with an operating system. This indicates that the hard disk is correctly detected and ready for the installation of a new operating system.

Self Monitoring and Reporting Technology

The S.M.A.R.T. (Self Monitoring and Reporting Technology) checks the hard disk drive during POST and gives a warning message if the hard disk drive requires servicing. If any critical hard disk drive warning is given during bootup, backup your data immediately and run Windows disk checking program. To run Window's disk checking program: click **Start** > select **Computer** > right-click a hard disk drive icon > choose **Properties** > click the **Tools** tab > click **Check Now** > click **Start**. You can also select "Scan ... sectors" for more effective scan and repair but the process will run slower.

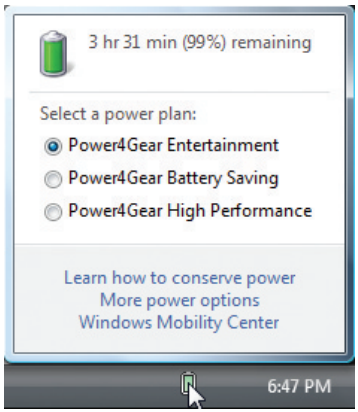


IMPORTANT! If warnings are still given during bootup after running a software disk checking utility, you should take your Notebook PC in for servicing. Continued use may result in data loss.

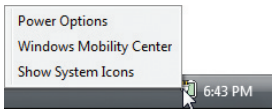
Checking Battery Power

The battery system implements the Smart Battery standard under the Windows environment, which allows the battery to accurately report the amount of charge left in the battery. A fully-charged battery pack provides the Notebook PC a few hours of working power. But the actual figure varies depending on how you use the power saving features, your general work habits, the CPU, system memory size, and the size of the display panel.

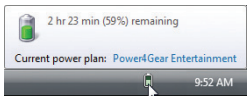
Note: Screen captures shown here are examples only and may not reflect what you see in your system.



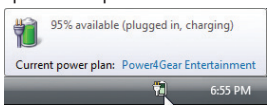
Left-click the battery icon



Right-click the battery icon



Cursor over the battery icon without power adapter.



Cursor over the battery icon with power adapter.

NOTE: You will be warned when battery power is low. If you continue to ignore the low battery warnings, the Notebook PC eventually enters suspend mode (Windows default uses STR).

WARNING! Suspend-to-RAM (STR) does not last long when the battery power is depleted. Suspend-to-Disk (STD) is not the same as power OFF. STD requires a small amount of power and will fail if no power is available due to complete battery depletion or no power supply (e.g. removing both the power adapter and battery pack).

Charging the Battery Pack

Before you use your Notebook PC on the road, you will have to charge the battery pack. The battery pack begins to charge as soon as the Notebook PC is connected to external power using the power adapter. Fully charge the battery pack before using it for the first time. A new battery pack must completely charge before the Notebook PC is disconnected from external power. It takes a few hours to fully charge the battery when the Notebook PC is turned OFF and may take twice the time when the Notebook PC is turned ON. The battery status indicator on the Notebook PC turns OFF when the battery pack is charged.

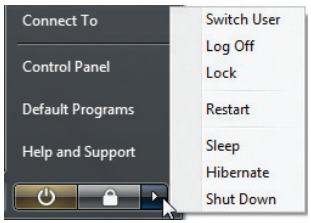
NOTE: The battery stops charging if the temperature is too high or the battery voltage is too high.

WARNING! Do not leave the battery pack discharged. The battery pack will discharge over time. If not using a battery pack, it must continued to be charged every three months to extend recovery capacity or else it may fail to charge in the future.

Power Options

The power switch turns ON and OFF the Notebook PC or putting the Notebook PC into sleep or hibernation modes. Actual behavior of the power switch can be customized in Windows Control Panel "Power Options."

For other options, such as "Switch User, Restart, Sleep, or Shut Down," click the arrowhead next to the lock icon.



Restarting or Rebooting

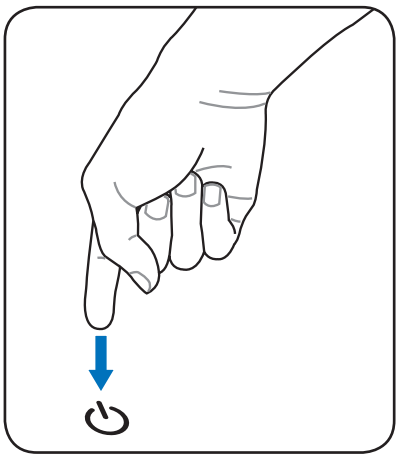
After making changes to your operating system, you may be prompted to restart the system. Some installation processes will provide a dialog box to allow restart. To restart the system manually, choose **Restart**.

IMPORTANT! To protect the hard drive, wait at least 5 seconds after turning OFF your Notebook PC before turning it back ON.

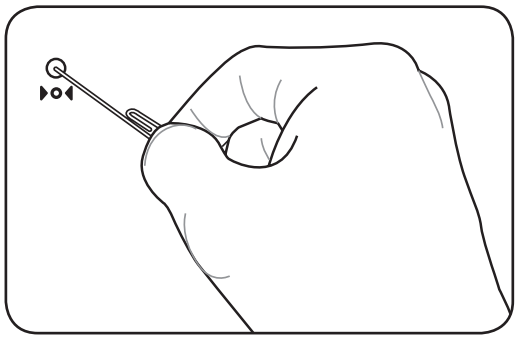
Emergency Shutdown

In case your operating system cannot properly turn OFF or restart, there are two additional ways to shutdown your Notebook PC:

(1) Hold the power button over 4 seconds, or



(2) Press the shutdown button on the bottom.



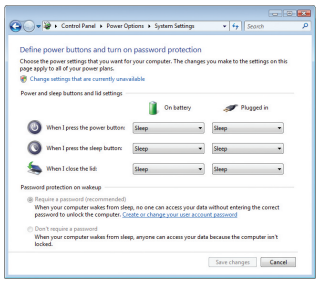
TIP: Use a straightened paper clip to press the shutdown button.

IMPORTANT! Do not use emergency shutdown while data is being written; doing so can result in loss or destruction of your data.

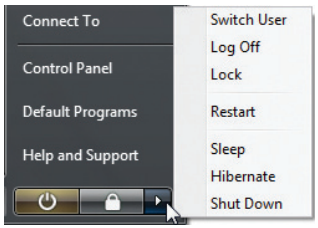
Power Management Modes

The Notebook PC has a number of automatic or adjustable power saving features that you can use to maximize battery life and lower Total Cost of Ownership (TCO). You can control some of these features through the Power menu in the BIOS Setup. ACPI power management settings are made through the operating system. The power management features are designed to save as much electricity as possible by putting components into a low power consumption mode as often as possible but also allow full operation on demand.

Sleep and Hibernate



Power management settings can be found in the Windows > Control Panel > **Power Options**. In **System Settings**, you can define "Sleep/Hibernate" or "Shut Down" for closing the display panel or pressing the power button. "Sleep" and "Hibernate" saves power when your Notebook PC is not in use by turning OFF certain components. When you resume your work, your last status (such as a document scrolled down half way or email typed half way) will reappear as if you never left. "Shut Down" will close all applications and ask if you want to save your work if any are not saved.



Sleep is the same as Suspend-to-RAM (STR). This function stores your current data and status in RAM while many components are turned OFF. Because RAM is volatile, it requires power to keep (refresh) the data. Click the **Start** button and the arrowhead next to the lock icon to see this option. You can also use the keyboard shortcut [**Fn F1**] to activate this mode. Recover by pressing any keyboard key except [Fn]. (NOTE: The power indicator will blink in this mode.)

Hibernate is the same as Suspend-to-Disk (STD) and stores your current data and status on the hard disk drive. By doing this, RAM does not have to be periodically refreshed and power consumption is greatly reduced but not completely eliminated because certain wake-up components like LAN needs to remain powered. "Hibernate" saves more power compared to "Sleep". Click the **Start** button and the arrowhead next to the lock icon to see this option. Recover by pressing the power button. (NOTE: The power indicator will be OFF in this mode.)

Thermal Power Control

There are three power control methods for controlling the Notebook PC's thermal state. These power control cannot be configured by the user and should be known in case the Notebook PC should enter these states. The following temperatures represent the chassis temperature (not CPU).

- The fan turns ON for active cooling when the temperature reaches the safe upper limit.
- The CPU decreases speed for passive cooling when the temperature exceeds the safe upper limit.
- The system shut down for critical cooling when temperature exceeds the maximum safe upper limit.

Special Keyboard Functions

Colored Hot Keys

The following defines the colored hot keys on the Notebook PC's keyboard. The colored commands can only be accessed by first pressing and holding the function key while pressing a key with a colored command.

NOTE: The Hot Key locations on the function keys may vary depending on model but the functions should remain the same.

"Zz" Icon (F1): Places the Notebook PC in suspend mode (either Save-to-RAM or Save-to-Disk depending on sleep button setting in power management setup).

Radio Tower (F2): Wireless Models Only: Toggles the internal wireless LAN or Bluetooth (on selected models) ON or OFF with an on-screen-display. When enabled, the corresponding wireless indicator will light. Windows software settings are necessary to use the wireless LAN or Bluetooth.

Envelope Icon (F3): Pressing this button will launch your Email application while Windows is running.

"e" Icon (F4): Pressing this button will launch your Internet browser application while Windows is running.

Filled Sun Icon (F5):
Decreases the display brightness

Open Sun Icon (F6):
Increases the display brightness

LCD Icon (F7): Toggles the display panel ON and OFF. (On certain models; stretches the screen area to fill the entire display when using low resolution modes.)

LCD/Monitor Icons (F8): Toggles between the Notebook PC's LCD display and an external monitor in this series: Notebook PC LCD -> External Monitor -> Both. (This function does not work in 256 Colors, select High Color in Display Property Settings.) **NOTE: Must connect an external monitor "before" booting up.**

Crossed-out Touchpad (F9): Toggles the built-in touchpad LOCKED (disabled) and UNLOCKED (enabled). Locking the touchpad will prevent you from accidentally moving the cursor while typing and is best used with an external pointing device such as a mouse. NOTE: Selected models have an indicator between the touchpad buttons will light when the touchpad is UNLOCKED (enabled) and not light when the touchpad is LOCKED (disabled).

Colored Hot Keys (cont.)

Speaker Icons (F10):
Toggles the speakers ON and OFF (only in Windows OS)

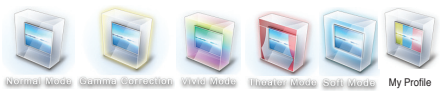
Speaker Down Icon (F11):
Decreases the speaker volume (only in Windows OS)

Speaker Up Icon (F12):
Increases the speaker volume (only in Windows OS)

Num Lk (Ins): Toggles the numeric keypad (number lock) ON and OFF. Allows you to use a larger portion of the keyboard for number entering.

Scr Lk (Del): Toggles the "Scroll Lock" ON and OFF. Allows you to use a larger portion of the keyboard for cell navigation.

Fn+C: Toggles "Splendid Video Intelligent Technology" function ON and OFF. This allows switching between different display color enhancement modes in order to improve contrast, brightness, skin tone, and color saturation for red, green, and blue independently. You can see the current mode through the on-screen display (OSD).



Fn+V: Toggles "Life Frame" software application.

Fn+T: Toggles "Power For Phone" software application.

Power4Gear eXtreme (Fn+Space Bar): This key toggles power savings between various power saving modes. The power saving modes control many aspects of the Notebook PC to maximize performance versus battery time. Applying or removing the power adapter will automatically switch the system between AC mode and battery mode. You can see the current mode through the on-screen display (OSD).

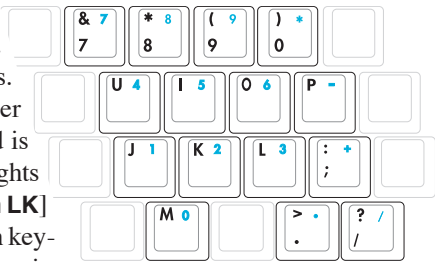
Microsoft Windows Keys

There are two special Windows keys on the keyboard as described below.

The key with the Windows Logo activates the Start menu located at the bottom left of the Windows desktop.

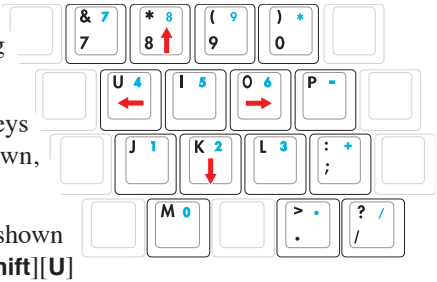
The other key, that looks like a Windows menu with a small cursor, activates the properties menu and is equivalent to pressing the right mouse button on a Windows object.

Keyboard as a Numeric Keypad



The numeric keypad is embedded in the keyboard and consists of 15 keys that make number intensive input more convenient. These dual-purpose keys are labeled in orange on the key caps. Numeric assignments are located at the upper right hand corner of each key as shown in the figure. When the numeric keypad is engaged by pressing [**Fn**][**Ins/Num LK**], the number lock LED lights up. If an external keyboard is connected, pressing the [**Ins/Num LK**] on the external keyboard enables/disables the NumLock on both keyboards simultaneously. To disable the numeric keypad while keeping the keypad on an external keyboard activated, press the [**Fn**][**Ins/Num LK**] keys on the Notebook PC.

Keyboard as Cursors



The keyboard can be used as cursors while Number Lock is ON or OFF in order to increase navigation ease while entering numeric data in spreadsheets or similar applications.

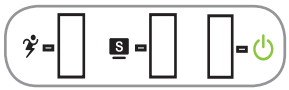
With Number Lock OFF, press [**Fn**] and one of the cursor keys shown below. For example [**Fn**][**8**] for up, [**Fn**][K] for down, [**Fn**][**U**] for left, and [**Fn**][**O**] for right.

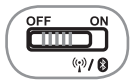
With Number Lock ON, use [**Shift**] and one of the cursor keys shown below. For example [**Shift**][**8**] for up, [**Shift**][**K**] for down, [**Shift**][**U**] for left, and [**Shift**][**O**] for right.

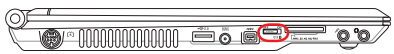
NOTE: The red arrows are illustrated here for your reference. They are not labeled on the keyboard as shown here.

Switches and Status Indicators

Switches







Power4Gear eXtreme Key

The Power4Gear eXtreme key toggles power savings between various power saving modes. The power saving modes control many aspects of the Notebook PC to maximize performance versus battery time. Applying or removing the power adapter will automatically switch the system between AC mode and battery mode. The selected mode is shown on the display.

Splendid Key (on selected models)

Toggles "Splendid Video Intelligent Technology" function ON and OFF. This allows switching between different display color enhancement modes in order to improve contrast, brightness, skin tone, and color saturation for red, green, and blue independently. The selected mode is shown on the display.

Power Switch

The power switch turns ON and OFF the Notebook PC or putting the Notebook PC into sleep or hibernation modes. Actual behavior of the power switch can be customized in Windows Control Panel "Power Options."

Wireless Switch

Wireless Models Only: Toggles the internal wireless LAN or Bluetooth (on selected models) ON or OFF with an on-screen display. When enabled, the corresponding wireless indicator will light. Windows software settings are necessary to use the wireless LAN or Bluetooth.

Switches and Status Indicators (cont.)

Status Indicators

Top

SPEED or POWER SAVING Indicator

Indicates whether the Notebook PC is in SPEED mode (recommended when using AC power) or POWER SAVING mode (recommended when using battery power).

Bluetooth Indicator

This is only applicable on models with internal Bluetooth (BT). This indicator will light to show that the Notebook PC's built-in Bluetooth (BT) function is activated.

Wireless LAN Indicator

This is only applicable on models with built-in wireless LAN. When the built-in wireless LAN is enabled, this indicator will light. (Windows software settings are necessary.)

Battery Charge Indicator

The battery charge indicator shows the status of the battery's power as follows:

ON: The Notebook PC's battery is charging when AC power is connected.

OFF: The Notebook PC's battery is charged or completely drained.

Blinking: Battery power is less than 10% and the AC power is not connected.

Capital Lock Indicator

Indicates that capital lock [Caps Lock] is activated when lighted. Capital lock allows some of the keyboard letters to type using capitalized letters (e.g. A, B, C). When the capital lock light is OFF, the typed letters will be in the lower case form (e.g. a,b,c).

Power Indicator

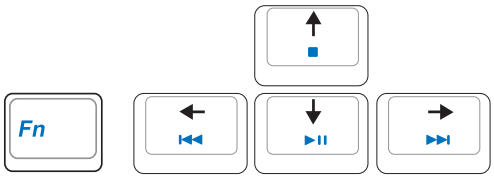
The power indicator lights when the Notebook PC is turned ON and blinks slowly when the Notebook PC is in the Suspend-to-RAM (Sleep) mode. This indicator is OFF when the Notebook PC is turned OFF or in the Suspend-to-Disk (Hibernation) mode.

Drive Activity Indicator

Indicates that the Notebook PC is accessing one or more storage device(s) such as the hard disk. The light flashes proportional to the access time.

Multimedia Control Keys (on selected models)

The multimedia control keys allows for convenient controlling of the multimedia application. The following defines the meaning of each multimedia control key on the Notebook PC.



Use the [Fn] key in combination with the arrow keys for CD control functions.

CD Play/Pause

During CD stop, begins CD play.
During CD play, pauses CD play.

CD Stop

During CD stop: Ejects the CD tray.
During CD play: Stops CD play.

CD Skip to Previous Track (Rewind) & Audio Volume Down

During CD play, this button has two functions:

Track: The first push will restart the current track. Second push will skip to the **previous** track.
Audio: Hold down to **decrease** audio volume.

CD Skip to Next Track (Fast Forward) & Audio Volume Up

During CD play, this button has two functions:

Track: Push once to skip to the **next** track during CD playing.
Audio: Hold down to **increase** audio volume.

Audio Volume Controls

Fn	**Fn + Speaker Icons (F10):**	Toggles the audio volume ON and OFF
Fn	**Fn + Down Speaker Icon (F11):**	Decreases the audio volume
Fn	**Fn + Up Speaker Icon (F12):**	Increases the audio volume

4. Using the Notebook PC

Pointing Device
Storage Devices
- **Expansion Card**
- **Optical drive**
- **Flash memory card reader**
- **Hard disk drive**

Memory (RAM)
Connections
- **Modem Connection**
- **Network Connection**
- **Wireless LAN Connection (on selected models)**
- **Bluetooth Wireless Connection (on selected models)**

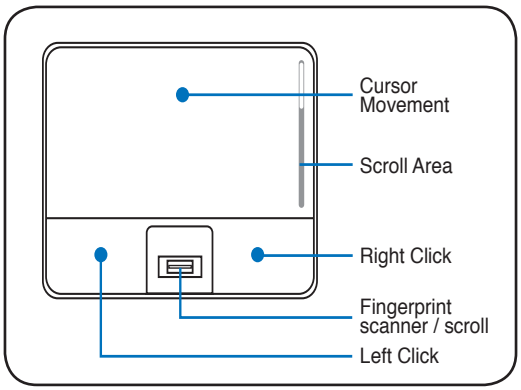
Trusted Platform Module (TPM) (on selected models)

NOTE: Photos and icons in this manual are used for artistic purposes only and do not show what is actually used in the product itself.

Pointing Device

The Notebook PC's integrated touchpad pointing device is fully compatible with all two/three-button and scrolling knob PS/2 mice. The touchpad is pressure sensitive and contains no moving parts; therefore, mechanical failures can be avoided. A device driver is still required for working with some application software.

IMPORTANT! Do not use any objects in place of your finger to operate the touchpad or else damage may occur to the touchpad's surface.

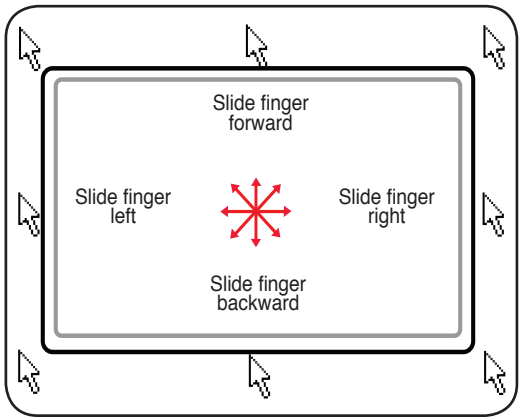


Using the Touchpad

Light pressure with the tip of your finger is all that is required to operate the touchpad. Because the touchpad is electrostatic sensitive, objects cannot be used in place of your fingers. The touchpad's primary function is to move the cursor around or select items displayed on the screen with the use of your fingertip instead of a standard desktop mouse. The following illustrations demonstrate proper use of the touchpad.

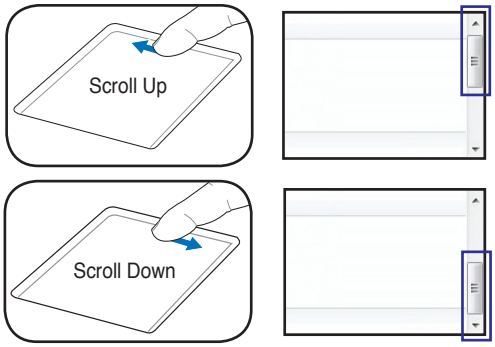
Moving The Cursor

Place your finger in the center of the touchpad and slide in a direction to move the cursor.



Scrolling (on selected models)

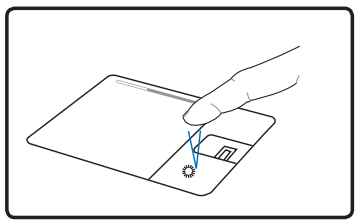
Slide your finger up or down on the right side to scroll a window up or down.



Touchpad Usage Illustrations

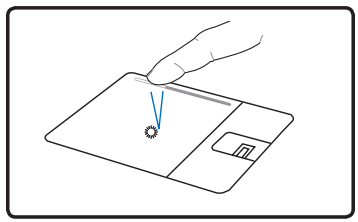
Clicking/Tapping - With the cursor over an item, press the left button or use your fingertip to touch the touchpad lightly, keeping your finger on the touchpad until the item is selected. The selected item will change color. The following 2 examples produce the same results.

Clicking



Press the left cursor button and release.

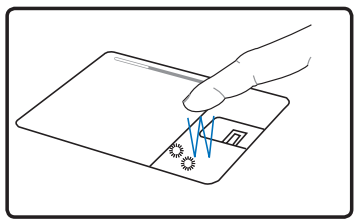
Tapping



Lightly but rapidly strike the touchpad.

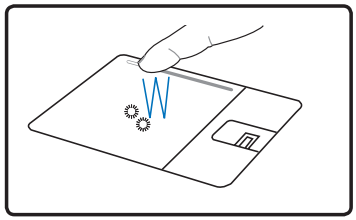
Double-clicking/Double-tapping - This is a common skill for launching a program directly from the corresponding icon you select. Move the cursor over the icon you wish to execute, press the left button or tap the pad twice in rapid succession, and the system launches the corresponding program. If the interval between the clicks or taps is too long, the operation will not be executed. You can set the double-click speed using the Windows Control Panel "Mouse." The following 2 examples produce the same results.

Double-Clicking



Press the left button twice and release.

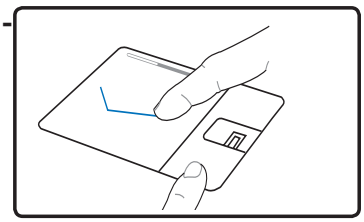
Double-Tapping



Lightly but rapidly strike the touchpad twice.

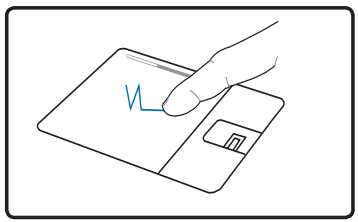
Dragging - Dragging means to pick up an item and place it anywhere on the screen you wish. You can move the cursor over the item you select, and while keeping the left button depressed, moving the cursor to the desired location, then release the button. Or, you can simply double-tap on the item and hold while dragging the item with your fingertip. The following illustrations produce the same results.

Dragging-Clicking



Hold left button and slide finger on touchpad.

Dragging-Tapping



Lightly strike the touchpad twice, sliding finger on touchpad during second strike.

Caring for the Touchpad

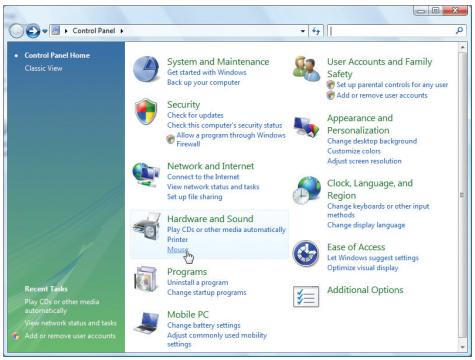
The touchpad is pressure sensitive. If not properly cared for, it can be easily damaged. Take note of the following precautions.

- Make sure the touchpad does not come into contact with dirt, liquids or grease.
- Do not touch the touchpad if your fingers are dirty or wet.
- Do not rest heavy objects on the touchpad or the touchpad buttons.
- Do not scratch the touchpad with your finger nails or any hard objects.

NOTE: The touchpad responds to movement not to force. There is no need to tap the surface too hard. Tapping too hard does not increase the responsiveness of the touchpad. The touchpad responds best to light pressure.

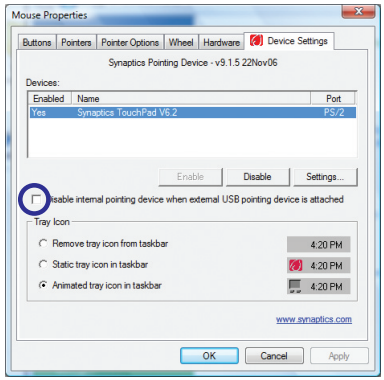
Automatic Touchpad Disabling

Windows can automatically disable the Notebook PC's touchpad when an external USB mouse is attached. This feature is normally OFF, to turn ON this feature, select the option in Windows **Control Panel** > **Mouse Properties** > **Device Settings**.



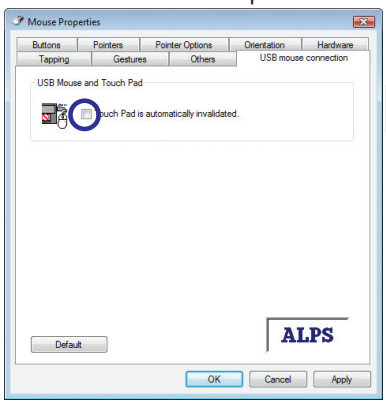
Find **Mouse** properties in the "Control Panel".

Models with Synaptics touchpad.



Select this option to enable this feature.

Models with ALPS touchpad.



Select this option to enable this feature.

Storage Devices

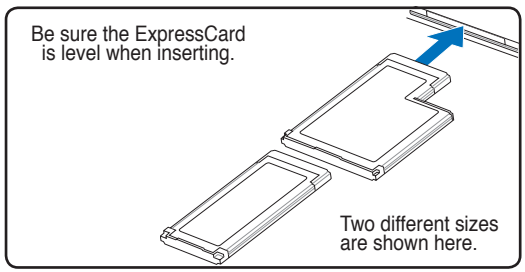
Storage devices allow the Notebook PC to read or write documents, pictures, and other files to various data storage devices. This Notebook PC has the following storage devices:

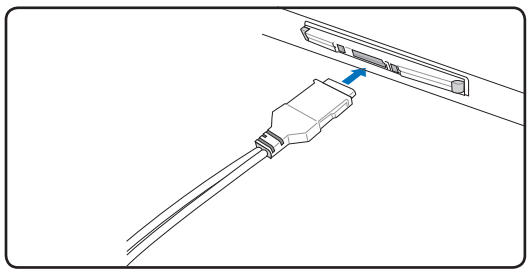
- Expansion Card
- Optical drive
- Flash memory reader
- Hard disk drive

Expansion Card

One 26pin Express card slot is available to support one ExpressCard/34mm or one ExpressCard/54mm expansion card. This new interface is faster by using a serial bus supporting USB 2.0 and PCI Express instead of the slower parallel bus used in the PC card slot. (Not compatible with previous PCMCIA cards.)

Inserting an Expansion Card

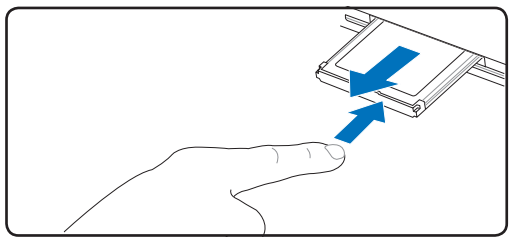




1. If there is an ExpressCard socket protector, remove it using the “Removing an ExpressCard” instructions below.
2. Insert the ExpressCard with the connector side first and label side up. Standard ExpressCards will be flush with the Notebook PC when fully inserted.
3. Carefully connect any cables or adapters needed by the ExpressCard. Usually connectors can only be inserted in one orientation. Look for a sticker, icon, or marking on one side of the connector representing the top side.

Removing an Expansion Card

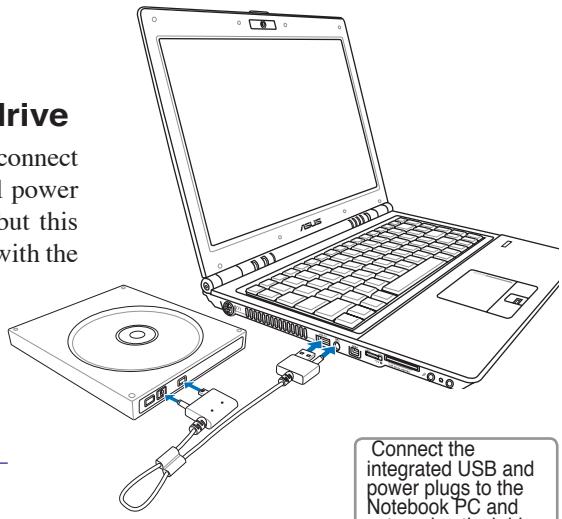
The ExpressCard slot does not have an eject button. Press the ExpressCard inwards and release to eject the ExpressCard. Carefully pull the ejected ExpressCard out of the socket.



Optical Drive (external)

Connecting an external optical drive

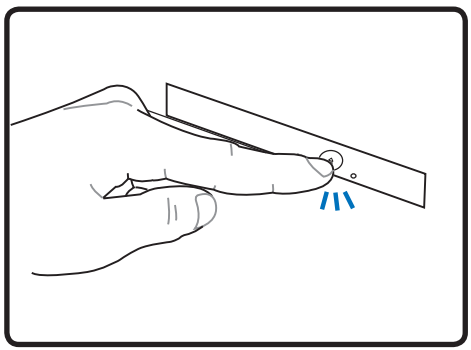
The USB 2.0 port provides a convenient solution to connect the external optical drive. Normally, an additional power adapter is required for an external optical drive but this Notebook PC features a power output jack for use with the provided optical drive.



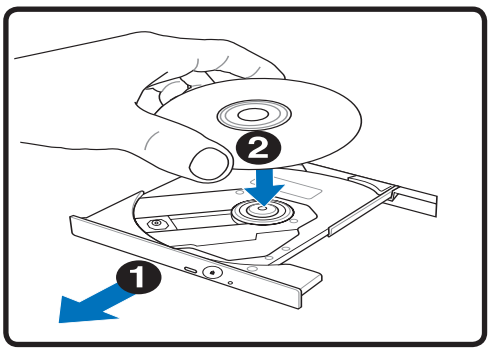
Connect the integrated USB and power plugs to the Notebook PC and external optical drive.

IMPORTANT! See Appendix for important safety and regulatory information.

Inserting an optical disc



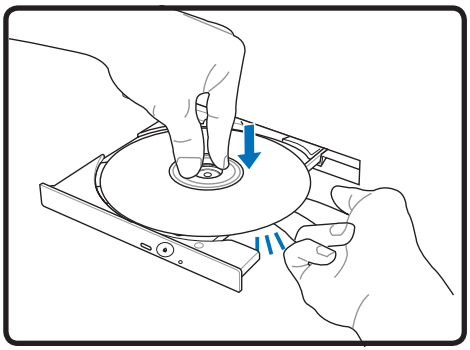
1. While the Notebook PC's power is ON, press the drive's eject button and the tray will eject out partially.



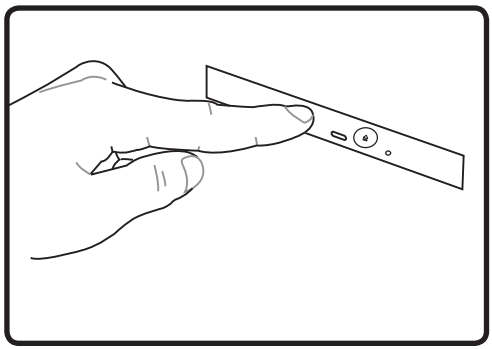
2. Gently pull on the drive's front panel and slide the tray completely out. Be careful not to touch the CD drive lens and other mechanisms. Make sure there are no obstructions that may get jammed under the drive's tray.

Optical Drive (external)

Inserting an optical disc (cont.)



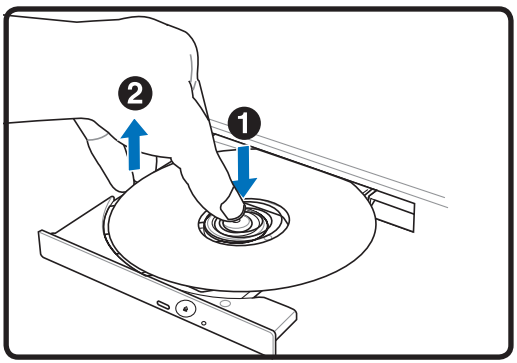
3. Hold the disc by the edge and face the disc's printed side up. Push down on both sides of the disc's center until the disc snaps onto the hub. **The hub should be higher than the disc when correctly mounted.**



4. Slowly push the drive's tray back in. The drive will begin reading the table of contents (TOC) on the disc. When the drive stops, the disc is ready to be used.

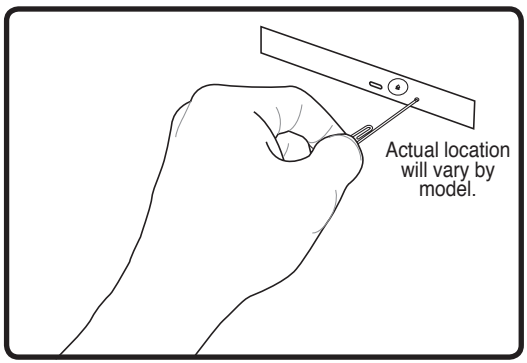
NOTE: It is normal to hear as well as feel the CD spinning with great intensity in the CD drive while data is read.

Removing an optical disc



Eject the tray and gently pry the edge of the disc upwards at an angle to remove the disc from the hub.

Emergency eject



The emergency eject is located in a hole on the optical drive and is used to eject the optical drive tray in case the electronic eject does not work. Do not use the emergency eject in place of the electronic eject. **Note: Make sure not to stab the activity indicator located in the same area.**

(continued on next page)

Optical Drive (external)

Using the Optical Drive

Optical discs and equipment must be handled with care because of the precise mechanics involved. Keep in mind the important safety instructions from your CD suppliers. Unlike desktop optical drives, the Notebook PC uses a hub to hold the CD in place regardless of the angle. When inserting a CD, it is important that the CD be pressed onto the center hub or else the optical drive tray will scratch the CD.

WARNING! If the CD disc is not properly locked onto the center hub, the CD can be damaged when the tray is closed. Always watch the CD closely while closing the tray slowly to prevent damage.

A CD drive letter should be present regardless of the presence of a CD disc in the drive. After the CD is properly inserted, data can be accessed just like with hard disk drives; except that nothing can be written to or changed on the CD. Using the proper software, a CD-RW drive or DVD+CD-RW drive can allow CD-RW discs to be used like a hard drive with writing, deleting, and editing capabilities.

Vibration is normal for all high-speed optical drives due to unbalanced CDs or CD print. To decrease vibration, use the Notebook PC on an even surface and do not place labels on the CD.

Listening to Audio CD

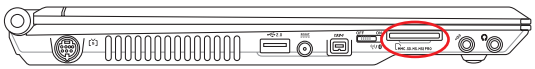
The optical drives can play audio CDs, but only the DVD-ROM drive can play DVD audio. Insert the audio CD and Windows™ automatically opens an audio player and begins playing. Depending on the DVD audio disc and installed software, it may require that you open a DVD player to listen to DVD audio. You can adjust the volume using hotkeys or Windows™ speaker icon on the taskbar.

Flash Memory Card Reader

Normally a memory card reader must be purchased separately in order to use memory cards from devices such as digital cameras, MP3 players, mobile phones, and PDAs. This Notebook PC has a single built-in memory card reader that can use many flash memory cards as shown in the example below. The built-in memory card reader is not only convenient, but also faster than most other forms of memory card readers because it utilizes the internal high-bandwidth PCI bus.

IMPORTANT! Flash memory card compatibility varies depending on Notebook PC model and flash memory card specifications. Flash memory card specifications constantly change so compatibility may change without warning.

Flash Memory Card Examples



xD Picture Card

MMC (Multimedia Card)
MMC Plus
RS-MMC (Reduced Size) (with MMC adapter)

SD (Secure Digital)
MiniSD (with SD adapter)

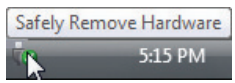
Memory Stick Micro (with MS adapter)

Memory Stick (MS)
Memory Stick Magic Gate (MG)
Memory Stick Select

Memory Stick Duo/Pro/Duo Pro/MG (with MS adapater)

IMPORTANT! Never remove cards while or immediately after reading, copying, formatting, or deleting data on the card or else data loss may occur.

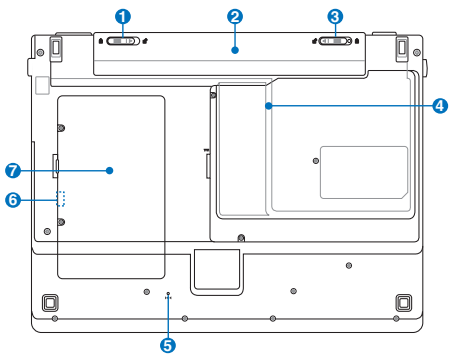
WARNING! To prevent data loss, use "Windows Safely Remove Hardware" on the taskbar before removing the flash memory card.



Hard Disk Drive

Hard disk drives have higher capacities and operate at much faster speeds than floppy disk drives and optical drives. The Notebook PC comes with a replaceable hard disk drive. Current hard drives support S.M.A.R.T. (Self Monitoring and Reporting Technology) to detect hard disk errors or failures before they happen. When replacing or upgrading the hard drive, always visit an authorized service center or retailer for this Notebook PC.

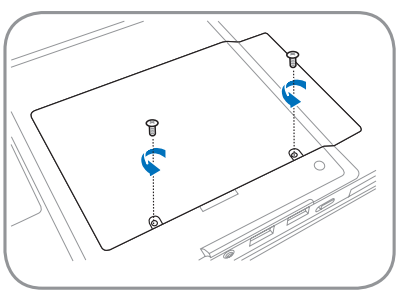
IMPORTANT! Poor handling of the Notebook PC may damage the hard disk drive. Handle the Notebook PC gently and keep it away from static electricity and strong vibrations or impact. The hard disk drive is the most delicate component and will likely be the first or only component that is damaged if the Notebook PC is dropped.

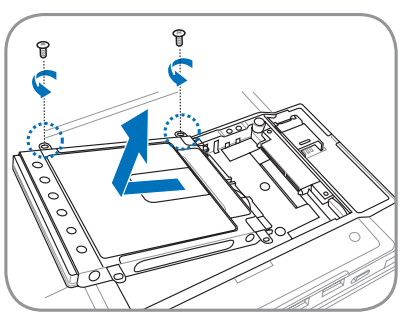


7 Hard Disk Drive Compartment

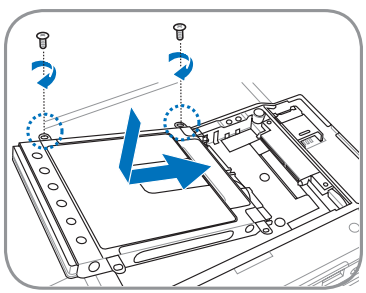
The hard disk drive is secured in a compartment. Visit an authorized service center or retailer for information on hard disk drive upgrades for your Notebook PC. Only purchase hard disk drives from authorized retailers of this Notebook PC to ensure maximum compatibility and reliability.

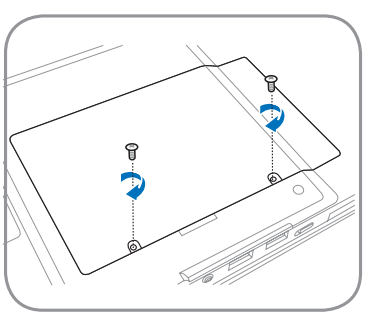
Removing the hard disk drive:





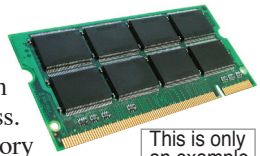
Installing the hard disk drive:

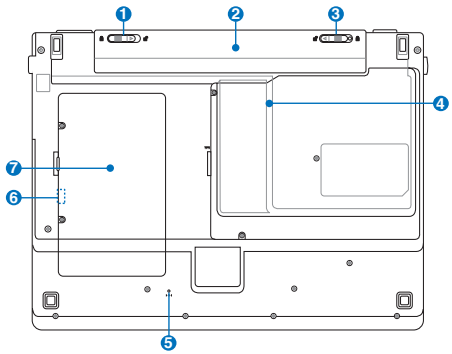




Memory (RAM)

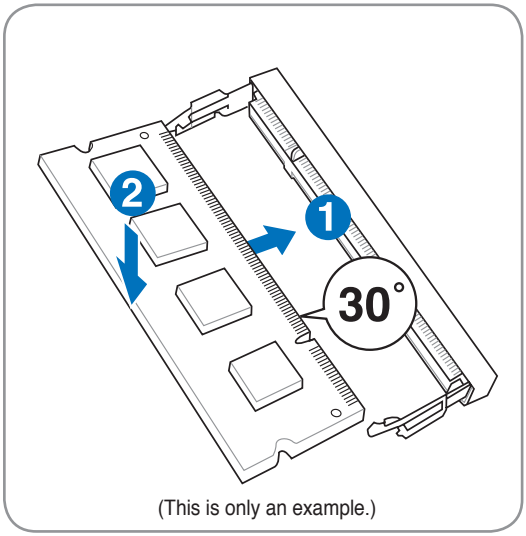
Additional memory will increase application performance by decreasing hard disk access. The BIOS automatically detects the amount of memory in the system and configures CMOS accordingly during the POST (Power-On-Self-Test) process. There is no hardware or software (including BIOS) setup required after the memory is installed.





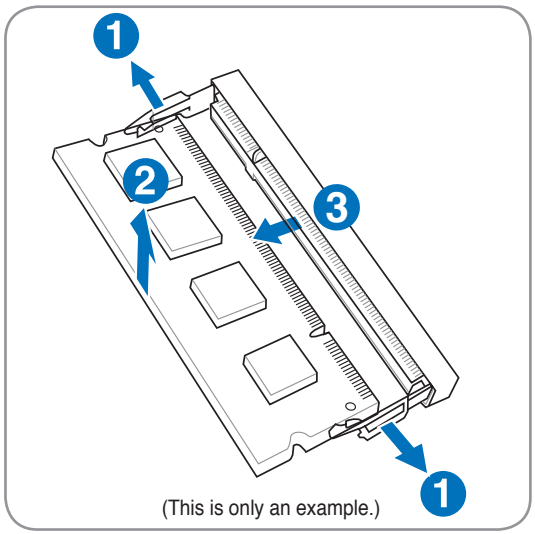
4 The memory compartment provides expansion capabilities for additional memory. Visit an authorized service center or retailer for information on memory upgrades for your Notebook PC. Only purchase expansion modules from authorized retailers of this Notebook PC to ensure maximum compatibility and reliability.

Installing a Memory Card:



(This is only an example.)

Removing a Memory Card:



(This is only an example.)

Connections

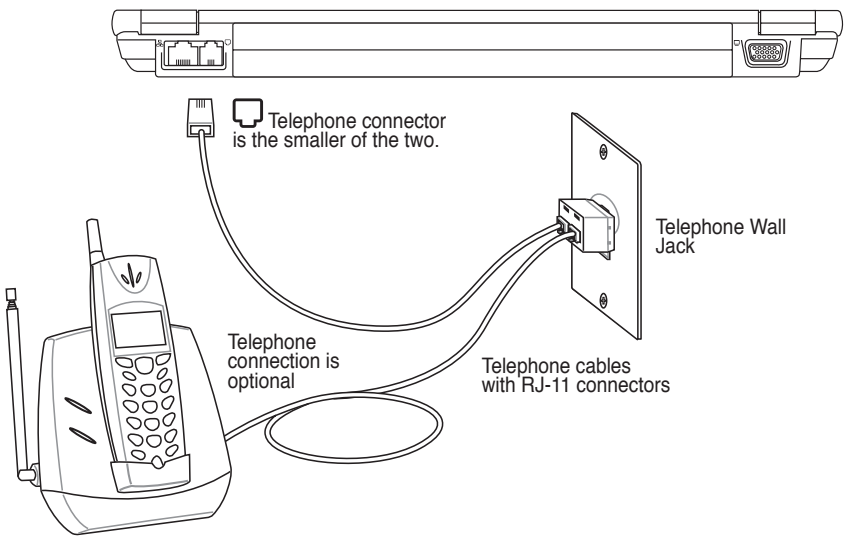
NOTE: The built-in modem and network cannot be installed later as an upgrade. After purchase, modem and/or network can be installed as an expansion card.

Modem Connection

The telephone wire used to connect the Notebook PC's internal modem should have either two or four wires (only two wires (telephone line #1) is used by the modem) and should have an RJ-11 connector on both ends. Connect one end to the modem port and the other end to an analog telephone wall socket (the ones found in residential buildings). Once the driver is setup, the modem is ready to use.

NOTE: When you are connected to an online service, do not place the Notebook PC in suspend (or sleep mode) or else you will disconnect the modem connection.

Example of the Notebook PC connected to a telephone jack for use with the built-in modem:



WARNING! Only use analog telephone outlets. The built-in modem does not support the voltage used in digital phone systems. Do not connect the RJ-11 to digital phone systems found in many commercial buildings or else damage will occur!

CAUTION: For electrical safety concerns, only use telephone cables rated 26AWG or higher. (see Glossary for more information)

Network Connection

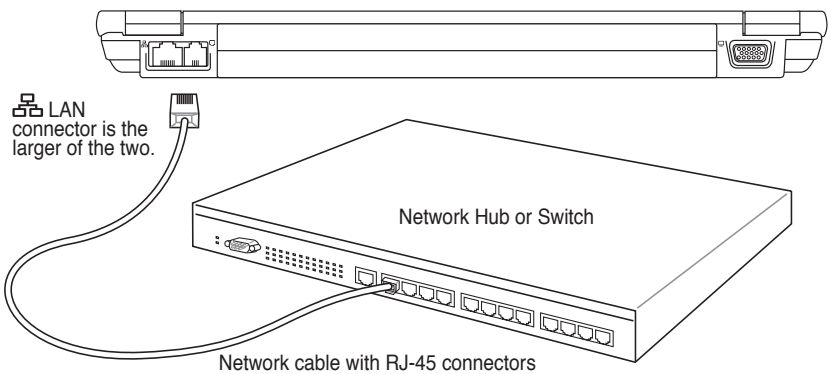
Connect a network cable, with RJ-45 connectors on each end, to the modem/network port on the Notebook PC and the other end to a hub or switch. For 100 BASE-TX / 1000 BASE-T speeds, your network cable must be category 5 or better (not category 3) with twisted-pair wiring. If you plan on running the interface at 100/1000Mbps, it must be connected to a 100 BASE-TX / 1000 BASE-T hub (not a BASE-T4 hub). For 10Base-T, use category 3, 4, or 5 twisted-pair wiring. 10/100 Mbps Full-Duplex is supported on this Notebook PC but requires connection to a network switching hub with "duplex" enabled. The software default is to use the fastest setting so no user-intervention is required.

1000BASE-T (or Gigabit) is only supported on selected models.

Twisted-Pair Cable

The cable used to connect the Ethernet card to a host (generally a Hub or Switch) is called a straight-through Twisted Pair Ethernet (TPE). The end connectors are called RJ-45 connectors, which are not compatible with RJ-11 telephone connectors. If connecting two computers together without a hub in between, a crossover LAN cable is required (Fast-Ethernet model). (Gigabit models support auto-crossover so a crossover LAN cable is optional.)

Example of the Notebook PC connected to a Network Hub or Switch for use with the built-in Ethernet controller.



Wireless LAN Connection (on selected models)

The optional built-in wireless LAN is a compact easy-to-use wireless Ethernet adapter. Implementing the IEEE 802.11 standard for wireless LAN (WLAN), the optional built-in wireless LAN is capable of fast data transmission rates using Direct Sequence Spread Spectrum (DSSS) and Orthogonal Frequency Division Multiplexing (OFDM) technologies on 2.4GHz/5GHz frequencies. The optional built-in wireless LAN is backward compatible with the earlier IEEE 802.11 standards allowing seamless interfacing of wireless LAN standards.

The optional built-in wireless LAN is a client adapter that supports Infrastructure and Ad-hoc modes giving you flexibility on your existing or future wireless network configurations for distances up to 40 meters between the client and the access point.

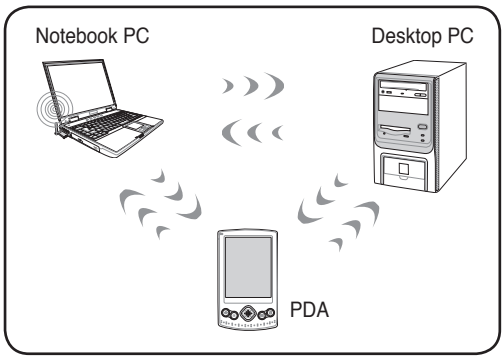
To provide efficient security to your wireless communication, the optional built-in wireless LAN comes with a 64-bit/128-bit Wired Equivalent Privacy (WEP) encryption and Wi-Fi Protected Access (WPA) features.

These are examples of the Notebook PC connected to a Wireless Network.

Ad-hoc mode

The Ad-hoc mode allows the Notebook PC to connect to another wireless device. No access point (AP) is required in this wireless environment.

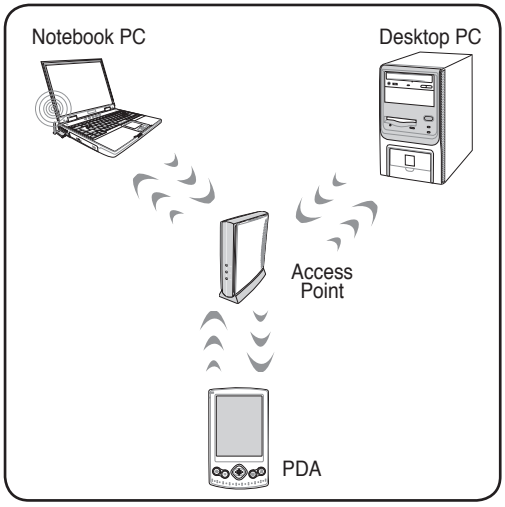
(All devices must install optional 802.11 wireless LAN adapters.)



Infrastructure mode

The Infrastructure mode allows the Notebook PC and other wireless devices to join a wireless network created by an Access Point (AP) (sold separately) that provides a central link for wireless clients to communicate with each other or with a wired network.

(All devices must install optional 802.11 wireless LAN adapters.)



Windows Wireless Network Connection

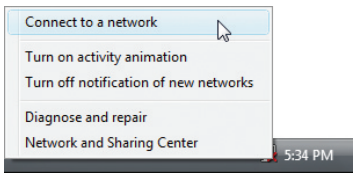
Connecting to a network

1. Switch ON the Wireless function if necessary for your model (see switches in Section 3).

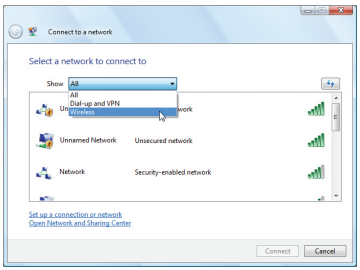
2. Press [FN F2] repeatedly until **Wireless LAN ON** or **WLAN & Bluetooth ON** is shown.

2b. Or double click the Wireless Console icon on the taskbar and select either the Wireless LAN + Bluetooth or just the Bluetooth.

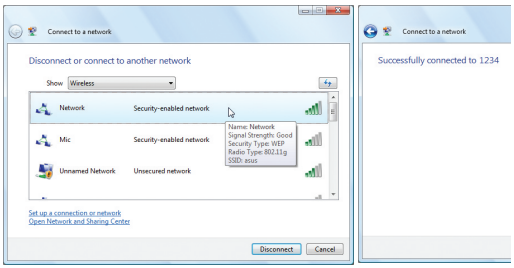
3. You should see the "Not Connected" network icon.



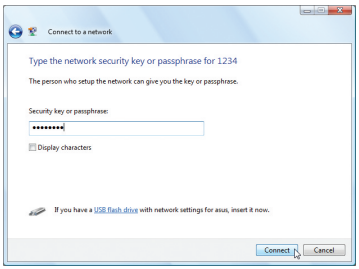
4. Right click on the network icon and select **Connect to a network**.



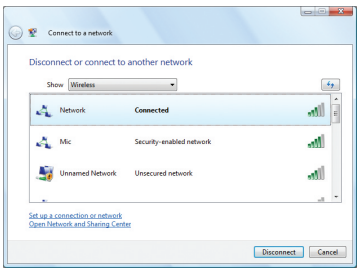
5. Select "Show **Wireless**" if you have many networks in your area.



6. Select the wireless network you want to connect to.



7. When connecting, you may have to enter a password.



8. After connection has been established, "Connected" will be shown.

Bluetooth Wireless Connection (on selected models)

Notebook PCs with Bluetooth technology eliminates the need for cables for connecting Bluetooth-enabled devices. Examples of Bluetooth-enabled devices may be Notebook PCs, Desktop PCs, mobile phones, and PDAs.

Note: If your Notebook PC did not come with built-in Bluetooth, you need to connect a USB or ExpressCard Bluetooth module in order to use Bluetooth.

Bluetooth-enabled mobile phones

You can wireless connect to your mobile phone. Depending on your mobile phone's capabilities, you can transfer phone book data, photos, sound files, etc. or use it as a modem to connect to the Internet. You may also use it for SMS messaging.

Bluetooth-enabled computers or PDAs

You can wireless connect to another computer or PDA and exchange files, share peripherals, or share Internet or network connections. You may also make use of Bluetooth-enabled wireless keyboard or mouse.

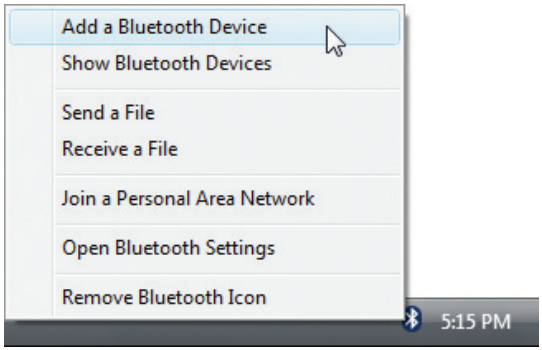
Turning ON and Launching Bluetooth Utility

This process can be used to add most Bluetooth devices. See Appendix for complete process.

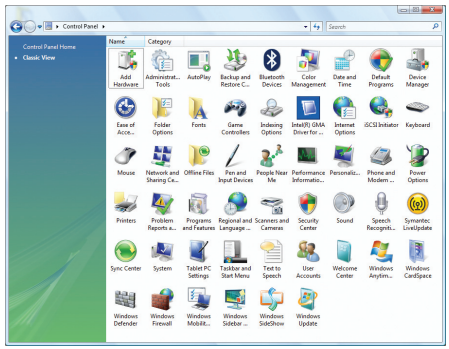
1. Switch ON the Wireless function if necessary for your model (see switches in Section 3).

2. Press [FN F2] repeatedly until **Wireless LAN ON** or **WLAN & Bluetooth ON** is shown.

2b. Or double click the Wireless Console icon on the taskbar and select either the Wireless LAN + Bluetooth or just the Bluetooth.



3. Select **Add a Bluetooth Device** on the taskbar men.



3b. Or Launch **Bluetooth Devices** from the Windows Control Panel.

Trusted Platform Module (TPM) (on selected models)

The TPM, or Trusted Platform Module, is a security hardware device on the system board that will hold computer-generated keys for encryption. It is a hardware-based solution that an help avoid attacks by hackers looking to capture passwords and encryption keys to sensitive data. The TPM provides the ability to the PC or notebook to run applications more secure and to make transactions and communication more trustworthy.

The security features provided by the TPM are internally supported by the following cryptographic capabilities of each TPM: hashing, random number generation, asymmetric key generation, and asymmetric encryption/decryption. Each individual TPM on each individual computer system has a unique signature initialized during the silicon manufacturing process that further enhances its trust/security effectiveness. Each individual TPM must have an Owner before it is useful as a security device.

TPM Applications

TPM is useful for any customer that is interested in providing an addition layer of security to the computer system. The TPM, when bundled with an optional security software package, can provide overall system security, file protection capabilities and protect against email/privacy concerns. TPM helps provide security that can be stronger than that contained in the system BIOS, operating system, or any non-TPM application.

Note: The TPM is disabled by default. Use BIOS setup to enable it.

Enabling TPM Security

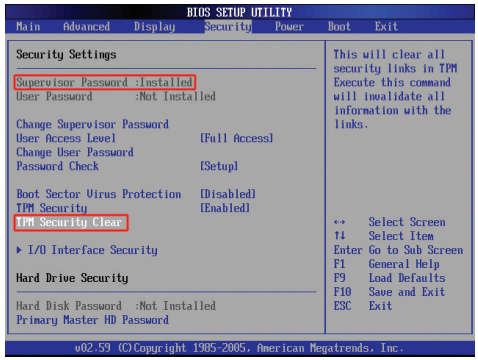
Enter **BIOS Setup** (press [F2] on system startup).
On **Security page**, set **TPM Security** to **[Enabled]**

Important: Use your TPM application's "Restore" or "Migration" function to backup your TPM security data.

Clearing TPM Secured Data

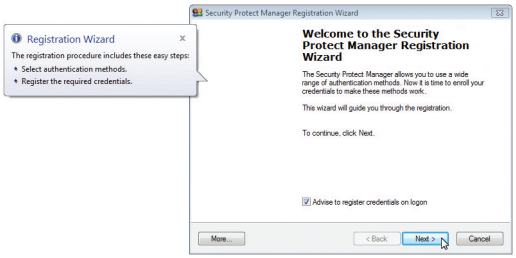
When **Supervisor Password** is installed, **TPM Security Clear** will appear. Use this item to clear all data secured by TPM. (You have to restart the Notebook PC after setting the password to see the security clear option.)

Important: Use should routinely backup your TPM secured data.

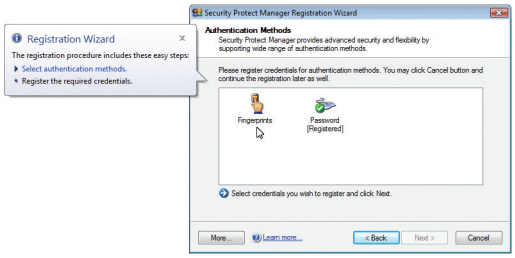


Fingerprint Registration (on selected models)

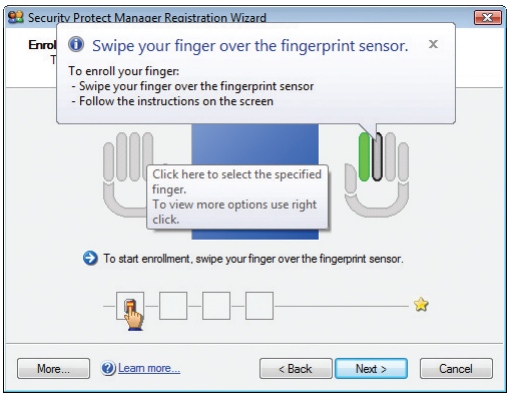
The fingerprint scanner can be used for instant and secure user authentication. These instructions will show you how to setup the fingerprint registration.



1. This wizard will automatically start when TPM is enabled in BIOS (see Appendix). Click **Next.**



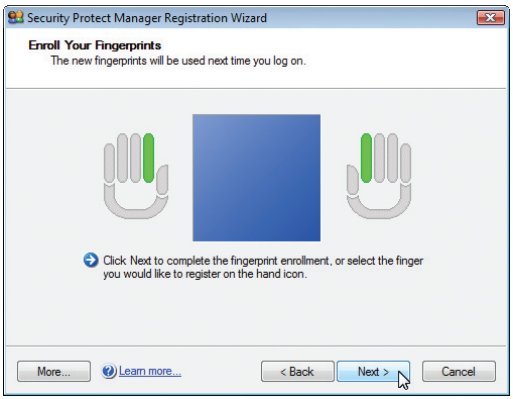
2. Select “Fingerprints” and click **Next.**



3. Select a finger on the diagram. Swipe the corresponding finger on the scanner slowly. You must swipe your finger multiple times for verification.

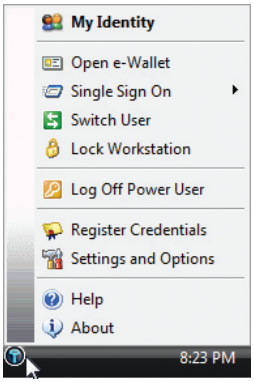
4. You must register at least two fingers to decrease the chance of problems.

Fingerprint Registration (on selected models) cont.

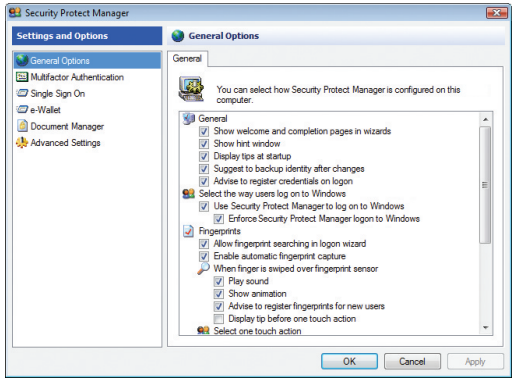


5. Select a finger on the diagram and swipe the corresponding finger on the scanner slowly. You must swipe your finger multiple times for verification. You must register at least two fingers to decrease the chance of any problems.

6. Click **Finish** when done.

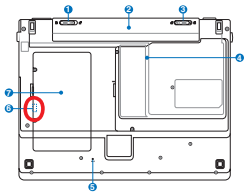


7. Right-click the icon on the taskbar and select “Settings and Options”.

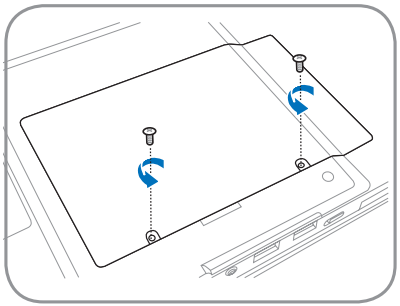


8. Select “General Options” and “Single Sign On” and configure your preferences.

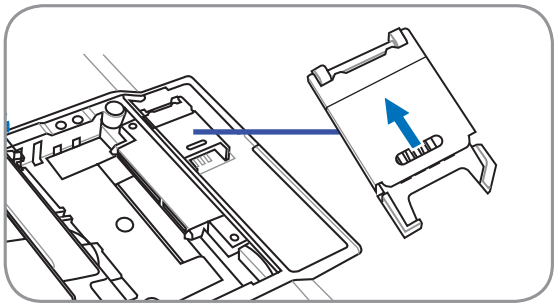
SIM Card Installation



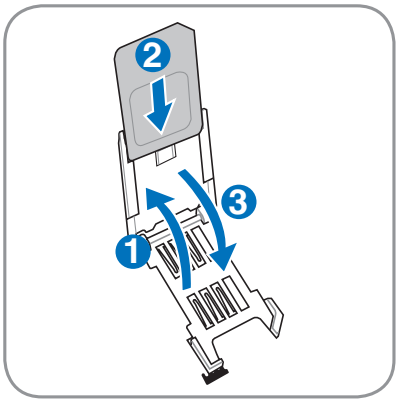
IMPORTANT! Before installing a SIM card, shut down the Notebook PC and remove the battery to prevent damage.



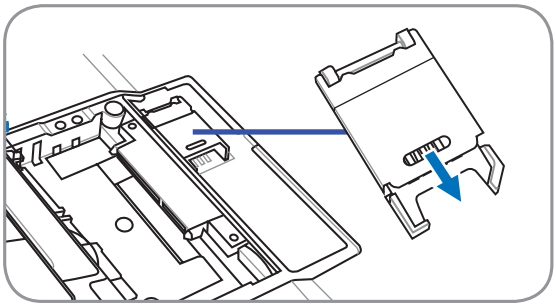
(1) Remove the screws to the compartment.



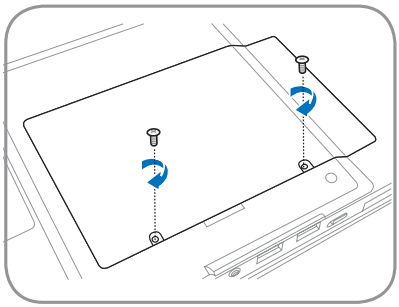
(2) Slide the SIM cover as shown to unlock.



(3) Insert a SIM card as shown.



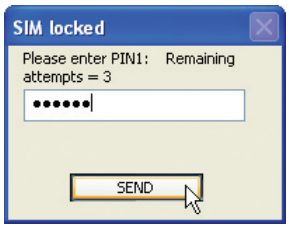
(4) Slide the SIM cover as shown to lock.



(5) Tighten the screws to the compartment.

3G Watcher Software (on selected models)

The 3G[1] Watcher software application will allow your Notebook PC to connect to 3G wireless networks normally used by 3G mobile phones. When connected, your Notebook PC can connect to the Internet just like using a wireless network. A shortcut to the 3G Watcher application will be placed on your desktop. Double-click it to launch the 3G Watcher software application.



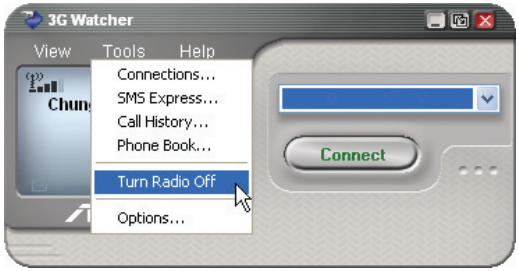
Launch the 3G Watcher application and your SIM card password (PIN1) will be asked if you have set one.

Once your PIN has been verified, searching for a 3G network will begin.

Once a 3G network has been discovered, click **Connect** to make a wireless network connection.

Once connected, the Connect button will show Disconnect instead.

Once connected, a message will appear with the network name.



When you are in an area that prohibits wireless transmissions (such as on an airplane), you can select **Turn Radio Off** from the "Tools" pull down menu.

Once the radio is turned OFF, an "x" will appear over the signal strength indicator.

[1] (See end of Section 4 for definition)

(continued on next page)

3G Watcher Software (on selected models)

Watcher window

Icons and indicators on the main window

The main Watcher window provides status information and allows you to initiate and monitor data connections or make and receive phone calls (if voice is supported by your 3G modem and your service provider). The main window uses these indicators:

	**Device status.** If an icon of the 3G modem with an "X" is displayed, Watcher is unable to detect the 3G modem. This indicates that the 3G modem is not fully inserted into the PC Card slot (in the case of non-embedded modems) or it is powered down. You may be able to resolve this problem by: • Ejecting the 3G modem and re-inserting it • Turning the WWAN switch on your PC off and on
 	**Signal strength and service status.** The number of bars beside the antenna increases as signal strength increases, to a maximum of five bars. The ToolTip that displays when you position the mouse pointer over this indicator shows the RSSI (Received Signal Strength Indication) in dBm. An antenna with a line through it indicates no service is available (Not in Service). You are outside of the coverage area or have insufficient signal strength to maintain a GSM data connection.
gprs edge 3G HS	**Coverage.** The icon shows the fastest service available: • GPRS icon - GPRS is the fastest service available in your current coverage area. • EDGE icon - EDGE is the fastest service available in your current coverage area. (supported on EDGE 3G modems) • 3G icon - UMTS is the fastest service available in your current coverage area. (supported on UMTS 3G modems) • HS icon - HSDPA is the fastest service available in your current coverage area. (supported on HSDPA 3G modems) When only the letters are displayed, (for example edge), you are within the coverage area, but have not yet acquired the service. When the indicator has an outline (edge), you have acquired service and are able to establish a data connection. When the indicator is filled (edge), you have a data connection on the wireless service.

3G Watcher Software (on selected models)

	**Roaming.** You are connected to a network other than your local service provider's. There may be a surcharge for roaming service. (This service may not be available.)
	**New SMS message.** Click the icon to open the SMS Express window and read your messages. When your SIM becomes full, this icon flashes and turns red. (Supported only on selected devices.)
	Data transmission. When the modem is connected to the network, the main Watcher window shows the amount of data received and sent.

If your service provider ask you to enter a GSM command (otherwise called a code or procedure), type the command from the main window.

System Tray Icons

Anytime Watcher is running, the Watcher icon appears in the system tray, indicating the connection status:

	Watcher cannot detect the 3G modem. Ensure that the 3G modem is powered on.
	You do not have an active high-speed connection.
	You have an active high-speed connection.
	You have new (unread) SMS messages.

3G (or 3-G) (on selected models)

Short for third-generation technology. It is used in the context of mobile phone standards. The services associated with 3G provide the ability to transfer simultaneously both voice data (a telephone call) and non-voice data (such as downloading information, exchanging email, and instant messaging). In marketing 3G services, video telephony has often been used as the main-stream application for 3G. Selected models integrate a SIM card slot for insertion of a 3G SIM card which is required to use 3G applications.

ASUS Map Software (on selected models)

Safety Information

WARNING! DO NOT USE ASUS MAP ON THE NOTEBOOK PC WHILE OPERATING A MOTOR VEHICLE.

The ASUS Map software is not a substitute for your personal judgment. The route suggestions should never supersede any local traffic regulation or your personal judgment and /or knowledge of safe driving practices. Prior to completing any maneuvers suggested by your ASUS Map software (for example, a U-turn or a left turn), verify that you can legally and safely complete the maneuver. Do not follow route suggestions if they direct you to perform an unsafe or illegal maneuver, would place you in an unsafe situation, or would route you into an area that you consider unsafe.

Do not use the ASUS Map software to locate emergency services (such as police, fire stations, hospitals, and clinics). The database may not include all emergency service providers. Use your own best judgment and ask for directions in these situations.

Quick Start

Start up/Main Menu

After the ASUS Map software starts, you will see the reminder warning to use your ASUS Map software safely and lawfully.

ASUS Map Software (on selected models) (cont.)

Basic Parts

These are the basic screens and buttons on the ASUS Map software.

Main Menu screen

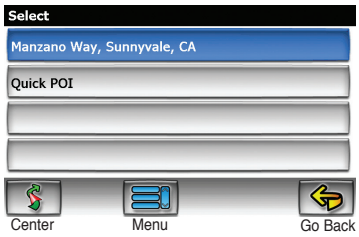
Navigation screen

2D View

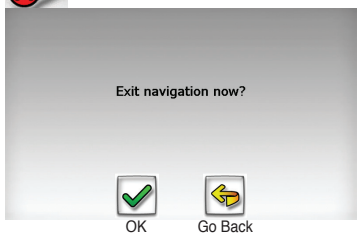
3D View

3D/2D Split View

Point of Interest screen



Exit screen



Other button definitions

Select current panned position.

Display spell mode.

Page UP in list.

Page DOWN in list.

Repeat voice instruction.

ASUS Map Software (on selected models) (cont.)

Step 1 -- Select Destination

You have many ways to select a destination. For this example, let's find a nearby Airport. Select by touching the screen:

- Use this button (or press F3) to activate main menu.
- Start Route Guidance
- Point of Interest
- State/Province NOTE: The software remembers the last State/Province, so this step is not necessary every time.
- By Category
- Airport
- Sort by Distance
- Select one of these and the system will calculate a route to that destination using the criteria set in the Setup menu.

ASUS Map Software (on selected models) (cont.)

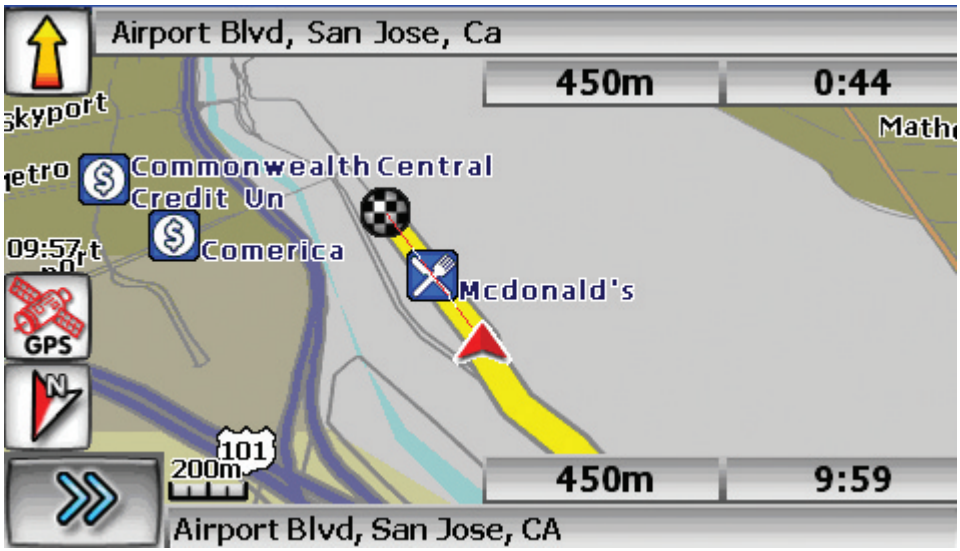
Step 2 -- Map/Guide along Route

Proceed to the highlighted route and drive while the ASUS Map software provides audible and visual guidance to your destination.

ASUS Map Software (on selected models) (cont.)

Step 3 -- Arrive at Destination

That's it! You've arrived at the selected destination.



Refer to the complete manual on the ASUS Map software disc to become more familiar with the many options available on your ASUS Map software.